BARNWELL GEOTHERMAL CORPORATION/MORGAN OIL, LTD.

Geothermal Development Transaction

CONFIDENTIAL

BARNWELL GEOTHERMAL CORPORATION/MORGAN OIL, LTD.

Geothermal Development Transaction

Document Number	Description
1.	Geothermal Development Agreement by and between MORGAN OIL, LTD. and BARNWELL GEOTHERMAL CORPORATION dated March 18, 1991.
2.	Exhibit "A" -- State of Hawaii Department of Land and Natural Resources Geothermal resources Mining Lease No. R-3 between STATE OF HAWAII and BARNWELL GEOTHERMAL CORPORATION, a Hawaii corporation.
3.	Schedule A-C -- Tax map key list
4.	Schedule D -- Tax map key list
5.	Exhibit "B" - Sublease of State of Hawaii Department of Land and Natural Resources Geothermal Resources Mining Lease No. R-3.
6.	Exhibit "C" - Information regarding Puna Well - Drilling Worksheet
7.	Exhibit "D" - Information regarding Puna Well Testing Program
8.	Exhibit "E" - Drilling Agreement
9.	Exhibit "F" - General Partnership Agreement of _____ Between MORGAN OIL, LTD. and BARNWELL GEOTHERMAL CORPORATION.
10.	Exhibit "G" - Limited Partnership Agreement of _____ Limited Partnership between MORGAN OIL, LTD., as general partner and BARNWELL GEOTHERMAL CORPORATION, as limited partner.
11.	Exhibit "H" - Memorandum to Charles L. Culton from Martin L. Jokl dated March 18, 1991 re Geothermex Comments on Draft Operations Agreement.

GEOTHERMAL DEVELOPMENT AGREEMENT

by and between

MORGAN OIL, LTD.

and

BARNWELL GEOTHERMAL CORPORATION

Dated

March 18, 1991

CONFIDENTIAL

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GEOTHERMAL DEVELOPMENT AGREEMENT

This Geothermal Development Agreement (the "Agreement") is made and entered into this 18th day of March, 1991 (the "Effective Date") by and between Barnwell Geothermal Corporation, a Delaware corporation ("BGC"), and Morgan Oil, Ltd., a Kentucky corporation ("MOL").

W I T N E S S E T H :

WHEREAS, BGC holds the State Geothermal Lease (defined below), a geothermal mineral lease from the State of Hawaii covering approximately 769 acres in the Puna District of the County of Hawaii; and

WHEREAS, BGC has drilled a well within said leased acreage believed to be useful as an injection well ("Lani-Puna VI"); and

WHEREAS, MOL desires to develop geothermal resources composed of one or more wells on the Area of Mutual Interest (defined below) by forming one or more partnerships of which MOL shall be the managing general partner and by acquiring, by way of sublease from BGC, BGC's interest in the State Geothermal Lease in consideration of a royalty interest in the production generated by wells operated by such partnership or partnerships as more specifically provided herein; and

WHEREAS, if the well(s) drilled and operated pursuant to this Agreement are capable of production in commercial quantities, BGC and MOL desire to form a Hawaii limited partnership to construct an electrical generation facility to purchase the production from said well or wells and produce electrical power for sale to utilities and/or consumers;

NOW, THEREFORE, in consideration of the premises, the mutual covenants, rights, and obligations contained herein, the benefits to be derived therefrom, and other good and valuable consideration, the receipt and the sufficiency of which are hereby acknowledged, BGC and MOL hereby agree as follows:

ARTICLE I

DEFINITIONS

As used herein, the following terms shall have the following meanings:

"Area of Mutual Interest" means (1) the area under which the mineral rights have been conveyed under the State Geothermal Lease, covering approximately 769 acres in the Puna District of the County of Hawaii as more particularly described in the State Geothermal Lease (defined below) and upon which a geothermal well or wells will be drilled by the Operator pursuant to this Agreement, (2) any area producing Geothermal Resources, that are either (a) originally explored through wells drilled on the Leased Lands, or (b) produced through holes drilled on the Leased Lands, and (3) any area producing Geothermal Resources explored or produced through areas previously contained in the Area of Mutual Interest as defined in clauses one and two of this definition.

"Bankruptcy Event" with respect to any party hereto means and includes any (1) entry of a decree or order relating to such party by a court having jurisdiction (a) granting relief under Title 11 of the United States Code or any successor statute; (b) approving as properly filed a petition seeking reorganization of such party under Title 11 of the United States Code or any successor statute, or any other state or federal law; (c) appointing a receiver, liquidator, trustee in bankruptcy or insolvency of such party or of the property of such party; (d) appointing a custodian, trustee, receiver, or agent with authorization to take charge of a material portion of the property of such party for the purpose of enforcing a lien against such property; or (e) providing for the winding up or liquidation of the affairs of such party, which decree or order remains in force undischarged and unstayed for the later of sixty (60) days of the expiration of time to appeal such order; (2) institution of proceedings or consent to the institution of proceedings by such party under any state or federal law relating to debtor rehabilitation, insolvency, bankruptcy, liquidation or reorganization, specifically including, but not limited to, Title 11 of the United States Code or any successor statute, which proceeding (unless consented to by such party) shall not be dismissed within sixty (60) days; (3) consent by such party to the appointment of a receiver, liquidator, or trustee in bankruptcy or other insolvency

proceedings of it or of its property; (4) action or inaction by such party to procure, permit or suffer the appointment of a custodian, trustee, receiver, or agent with the authorization to take charge of a material portion of its property or for the purpose of enforcing a lien against such property; (5) assignment by such party for the benefit of creditors or admission by such party that it is generally not able to pay its debts as they become due; and (6) inability of such party to pay its debts as they become due.

"Drilling Partnership" means the partnership, either general or limited, formed by MOL or an affiliate to drill the Well and, except as otherwise agreed by BGC, of which MOL or an affiliate is the Managing Partner.

"Event of Default" has the meaning provided in Section 5.1 hereof.

"Funds" has the meaning provided in Section 3.3.1 hereof.

"Generation Facility" means the electrical power generation facility contemplated by this Agreement and by the applicable Partnership Agreement to be constructed to generate electricity from the Geothermal Resources produced from the Well or other wells developed in the Area of Mutual Interest.

"Generation Limited Partnership" means the Hawaii limited partnership which may be formed pursuant to the Generation Limited Partnership Agreement, of which BGC shall be the sole limited partner, MOL the sole general partner and Geothermex, Inc. the agent to be appointed by such partnership pursuant to the Operations Agreement to design, construct, operate and manage the Generation Facility on behalf of the Generation Limited Partnership.

"Generation Limited Partnership Agreement" means the limited partnership agreement to be entered into by MOL and BGC in substantially the form attached hereto as Exhibit "G" and incorporated herein by this reference providing for the formation of the Generation Limited Partnership.

"Generation Partnership Agreement" means the general partnership agreement to be entered into by MOL and BGC in substantially the form attached hereto as Exhibit "F" and incorporated herein by this reference providing for the formation of the Generation Partnership.

"Generation Partnership" means the Hawaii general partnership which may be formed pursuant to the Generation Partnership Agreement of which BGC and MOL shall be the sole general partners and Geothermex, Inc. the agent to be appointed by the partnership pursuant to the Operations Agreement to design, construct, manage and operate the Generation Facility on behalf of the Generation Partnership.

"Geothermal Resources" has the meaning given it by Section 182-1 of the Hawaii Revised Statutes and includes but is not limited to, hot water and/or steam.

"Lani-Puna VI Sublease" means that certain sublease, in substantially the form of the Sublease attached hereto as Exhibit "B", but pursuant to Section 4.4 of this Agreement conveying a portion of the State Geothermal Lease to the Generation Partnership or the Generation Limited Partnership, as the case may be, to convey the mineral interests necessary for the Generation Partnership or the Generation Limited Partnership, as the case may be, to operate the Lani-Puna VI Well which shall convey the rights to those parcels listed on Schedule D attached hereto and incorporated herein by reference.

"Lani-Puna VI Well" means the well identified in the report prepared by Geothermex, Inc. entitled "Drilling History and Geology of the Lani Puna VI Geothermal Test, Lani Puna Prospect" and dated December, 1984.

"Leased Lands" means the lands under which the mineral interests demised by the State Geothermal Lease are contained.

"Managing Partner" means the sole managing general partner of the Drilling Partnership, namely, either MOL or an affiliate, which manages the day to day affairs of the Drilling Partnership as provided for in the applicable partnership agreement for the Drilling Partnership, if MOL elects to form such partnerships pursuant to Section 3.3.1 hereof.

"Operations Agreement" means the management and operations agreement to be entered into between either the Generation Partnership or the Generation Limited Partnership and Geothermex, Inc. in substantially the form attached hereto as Exhibit "H" (which shall include the points raised in that memo of March 10, 1991 also attached as a portion of Exhibit "H") and incorporated herein by

reference providing for the design, construction, operation and management of the Generation Facility on behalf of the applicable Partnership.

"Operator" means either (i) the managing general partner of the Drilling Partnership, currently contemplated to be MOL, or any affiliate of MOL designated as a successor pursuant to Section 3.3.1 or (ii) MOL in the event the Funds are raised pursuant to Section 3.3.2 hereof.

"Partnership Agreement" means and refers individually to the Generation Limited Partnership Agreement and the Generation Partnership Agreement, as the case may be.

"Prospect Area" means the approximately 40 acres, comprising parcels listed as the Tax Map Key Nos. listed on Schedule A attached hereto and incorporated herein by reference and studied by Geothermex, Inc. in its report entitled Analysis and Recommended Development of Barnwell Acreage, Puna Geothermal Field, Island of Hawaii dated November 1989.

"State Geothermal Lease" is that certain State of Hawaii Department of Land and Natural Resources Geothermal Resources Mining Lease No. R-3 dated August 10, 1981 by and between the State of Hawaii and BGC which Lease conveys certain mineral rights within approximately 769 acres in the Puna District, County of Hawaii, State of Hawaii, a copy of which is attached hereto as Exhibit "A" and incorporated herein by this reference.

"Sublease" means that certain Sublease, in substantially the form attached hereto as Exhibit "B" and incorporated herein by reference, pursuant to which BGC shall convey to the Operator the geothermal drilling rights within the parcels designated by Tax Map Key Nos. listed on Schedule B attached hereto and incorporated herein by reference and which were granted to BGC under the State Geothermal Lease.

"Well" means the first geothermal well, either exploratory or production, drilled in the Prospect Area pursuant to this Agreement, that is capable of production in commercial quantities. More than one hole may be drilled during the drilling of the Well.

ARTICLE II

FORM OF TRANSACTION AND TERM

Section 2.1. General Nature of Transaction. BGC and MOL hereby agree that the Operator shall develop Geothermal Resources by means of geothermal drilling to be completed in the Area of Mutual Interest. If the Operator performs the duties assigned it as described hereunder in compliance with the time frames set forth in Articles III and IV hereof, BGC shall convey in accordance with Section 3.2.2 of this Agreement, its right, title and interest within the parcels designated by the Tax Map Key Nos. listed on Schedule A attached hereto and incorporated by reference, under the State Geothermal Lease by way of the Sublease, in exchange for a royalty interest payable to BGC of (1) fifteen percent (15%), in addition to (2) the royalty due under the State Geothermal Lease (currently ten percent (10%)), of all production from the Well or wells to be developed and operated by Operator hereunder in the Area of Mutual Interest. Further, depending on whether the Funds are raised pursuant to Sections 3.3.1 or 3.3.2 hereof, BGC and MOL may form either the Generation Partnership or the Generation Limited Partnership, as set forth more specifically in Article IV hereof, to construct a Generation Facility to produce electricity for sale to utilities and/or consumers or otherwise sell any Geothermal Resources developed in the Area of Mutual Interest pursuant to the drilling operations to be undertaken in accordance with Article III hereof.

Section 2.2. Term. This Agreement shall be effective from and after the Effective Date. It shall continue in existence until the earliest of: (1) termination pursuant to any provision of this Agreement, (2) the termination of the State Geothermal Lease, (3) the termination of the Sublease, or (4) a Bankruptcy Event occurs with respect to the Operator and one of the following shall have occurred: (a) the Drilling Partnership has not been formed, (b) the Drilling Partnership shall not have raised the Funds, as defined in Section 3.3.1 hereof, to commence drilling pursuant to Section 3.2 hereof, (c) in the event the Funds are raised by an offering of capital stock of MOL, in the reasonable judgment of BGC, the Funds are insufficient to commence drilling pursuant to Section 3.2 hereof.

Section 2.3. Liability and Expenses; No Partnership. As the party developing the Geothermal Resources within the Area of Mutual Interest pursuant to the terms of this Agreement, the Operator shall bear all expenses in connection with the obligations to be performed by it hereunder and shall be (and BGC shall not) subject to all liabilities, costs, damages, claims and expenses relating to or arising out of the geothermal development activities to be performed pursuant to this Agreement. Nothing herein shall create or be deemed to create a partnership or joint venture between BGC and MOL or BGC and any affiliate of MOL, if such affiliate is the Operator hereunder.

ARTICLE III

DRILLING OPERATIONS

Section 3.1. The Operator.

Section 3.1.1. Identity of Operator; General Duties. MOL or, upon consent of BGC which shall not be unreasonably withheld, an affiliate of MOL (which affiliate shall agree to and be bound by the terms, provisions and covenants of this Agreement), either (i) in its capacity as Managing Partner of the Drilling Partnership or (ii) if the Funds are raised by an offering of capital stock or equity securities pursuant to Section 3.3.2, shall be deemed the Operator and shall have control over and shall conduct and direct all geothermal development and drilling operations within the Area of Mutual Interest. The Operator shall discharge its obligations hereunder in compliance with all applicable laws and regulations, including but not limited to Chapters 182, 183 and 184 of the Hawaii Revised Statutes, as amended, Rule 12 of the Planning Commission of the County of Hawaii, State of Hawaii, and Title 13, Subtitle 7 of the Administrative Rules of the State of Hawaii entitled "Rules on Leasing and Drilling of Geothermal Resources". Operator shall discharge its obligations hereunder and shall operate the Well or additional wells developed in the Area of Mutual Interest in a good and workmanlike manner, as a prudent operator would in similar circumstances and in a manner that conforms to the most prudent practices and engineering principles in use in the industry.

Section 3.1.2. MOL as Initial Operator. MOL shall serve as Operator until (1) MOL resigns its position as Operator in favor of an affiliate of MOL (with the consent of BGC which shall not be unreasonably withheld); or (2) if a Bankruptcy Event with respect to the Operator occurs then the Managing Partner of the Drilling Partnership shall appoint a new Operator (upon the written consent of BGC which shall not be unreasonably withheld), if both (a) the Drilling Partnership has been formed and (b) such partnership has raised the drilling funds pursuant to Section 3.2 hereof.

Section 3.2. Preliminary Operations, Subleasing and Permitting.

Section 3.2.1. Preparation of Permit Applications; Lease Extension; Surface Owner Consents. Within sixty (60) days of the Effective Date, the Operator shall (1) prepare all documents required by either the State of Hawaii or the County of Hawaii that must be filed with the appropriate State and County agencies and departments in order to obtain all permits necessary to drill and flow test the Well; (2) prepare all documents necessary to obtain a five (5) year extension of the State Geothermal Lease and the approval and consent of the State of Hawaii to the Sublease; (3) obtain all necessary consents (as may be required by law or which would be required to conduct the drilling in a prudent and workman-like manner from the surface rights holder(s) of the land containing the proposed Well site allowing the Operator to drill the Well at the proposed site for the Well and provide any and all access necessary to move equipment to and from the Well as may be reasonably necessary; and (4) notify BGC of the completion of the actions described in the above clauses one, two and three of this Section 3.2.1. Notwithstanding the above, if the Operator elects to place the proposed site for the Well within the parcels designated by the Tax Map Key Nos. listed on Schedule C attached hereto and incorporated herein by reference, the Operator shall set forth such election within said notice to BGC and shall not be required to obtain the surface owner/occupier consents described in clause three of the preceding sentence.

Section 3.2.2. Sublease. Within fourteen (14) days following the notification to BGC required by Section 3.2.1 hereof, BGC and the Operator shall execute and deliver the Sublease which shall become effective upon the date of consent of the State of Hawaii to the Sublease.

Section 3.2.3. Permits and Lease Extension Filings. Within fourteen (14) days following the execution of the Sublease specified in Section 3.2.2 hereof, the Operator shall deliver and file all documents necessary to obtain all permits (either exploratory or for a complete development program) for the drilling and flow testing of the Well and all documents necessary to obtain a five (5) year extension of the State Geothermal Lease.

Section 3.2.4. Obtaining of Permits. Following the filings specified in Section 3.2.3 hereof, the Operator shall work diligently to obtain all permits necessary to drill and flow test the Well. The Operator shall obtain the drilling permit within eighteen (18) months of the date on which the filing of the application for the permits is made; provided however, that the failure to obtain final drilling permits within eighteen (18) months from such date of filing shall not constitute an Event of Default hereunder if the delay is due to causes beyond the control of the Operator, including difficulties in obtaining the necessary permits from the applicable government agencies, and in the reasonable judgment of BGC, the Operator has worked and continues to work beyond said eighteen (18) month time limit, diligently and in good faith to obtain such permits.

Section 3.2.5. Extension of the State Geothermal Lease and Consent to Sublease. Following the filings specified in Section 3.2.3 hereof, the Operator shall work diligently and in good faith to obtain a five (5) year extension of the primary term of the State Geothermal Lease and the consent of the State of Hawaii to the Sublease. Unless BGC otherwise requires, the Operator shall obtain such extension and consent within six (6) months from the date such applications are filed.

Section 3.3. The Funds.

Section 3.3.1. Drilling Partnership(s). Within one hundred eighty (180) days from the date all necessary permits to drill have been obtained, the Operator shall form the Drilling Partnership, which within such one hundred eight (180) day period shall: (1) (a) raise funds sufficient to drill the Well substantially in accordance with the well design specified in the draft Drilling Worksheet (the "Drilling Worksheet") prepared by Geothermex, Inc. ("Geothermex"), attached hereto as Exhibit "C" and incorporated herein by this reference; (b) raise funds sufficient to perform a three (3) week flow test on the Well according to the Puna Well Testing

Program and prepared by Geothermex, attached hereto as Exhibit "D" and incorporated herein by this reference (the "Well Testing Procedure"); and (c) raise funds sufficient to plug and abandon the Well should it prove incapable of production in commercial quantities; and (2) Operator shall notify BGC that the Drilling Partnership has been formed and that the Drilling Partnership has raised the necessary drilling, testing and plugging and abandonment funds (in the aggregate , the "Funds"). The Operator shall in good faith determine the total amount of Funds required to accomplish said drilling, testing, and plugging and abandonment, but in no case shall that total be less than $1,600,000. In connection with the raising of the Funds through the Drilling Partnership and any offering of partnership units or interests in connection therewith, MOL and the Operator, if MOL shall not be the Operator, shall indemnify, defend and hold harmless BGC, Barnwell Industries, Inc. ("Barnwell") and all subsidiaries of Barnwell and the officers and directors of BGC Barnwell and said subsidiaries (the "Indemnified Parties") from any and all claims, damages, costs, liabilities (including reasonable attorneys' fees) relating to or arising from such method of raising the Funds.

Section 3.3.2. Corporate Funds or Stock Offering. Notwithstanding any provision in Section 3.3.1 to the contrary, the Operator shall have the option, in lieu of forming the Drilling Partnership(s), raise the Funds (i) through the use of its own corporate funds or (ii) by an offering of its capital stock, or other securities or debt instruments. MOL, and the Operator, if MOL shall not be the Operator, shall indemnify, defend and hold harmless BGC from any and all claims, damages, costs, liabilities (including reasonable attorneys' fees) relating to or arising from such equity or debt offering as more particularly set forth in Section 4.3.2 hereof.

Section 3.4. Drilling the Well.

Section 3.4.1. Commencement of Drilling the Well. The Operator shall make all arrangements necessary to commence drilling prior to the earliest of the following: (1) the expiration of any of the permits needed for the drilling, (2) the expiration of the State Geothermal Lease or any extension thereof, or (3) one year from the date on which all necessary permits have been granted.

Section 3.4.2. Drilling Contractor. All drilling of the Well or additional wells developed pursuant to this Agreement shall be drilled pursuant to a Drilling Agreement to be entered into between the Operator and Water Resources International, Inc., an affiliate of BGC ("WRI") in substantially the form attached hereto as Exhibit "E" and incorporated herein by this reference (the "Drilling Agreement"). Notwithstanding the foregoing, WRI shall be under no obligation to mobilize a drilling rig prior to August 1, 1992. The Operator and WRI shall enter into the Drilling Agreement no later than ninety (90) days following the date all necessary permits to drill the Well have been granted.

Section 3.4.3. Consultation with Geothermex. Once spudded, the Well shall be drilled in a continuous operation until the hole is completed. The Operator shall retain, at its sole expense, Geothermex to provide geologic consulting, drilling engineering, testing and reservoir evaluation services during the drilling of the Well and any additional wells.

Section 3.4.4. Drilling Specifications. The drilling undertaken by WRI shall be in substantial compliance with the methods, specifications and procedures set forth in the Drilling Worksheet referred to in Section 3.3.1 of this Agreement. If the capabilities and capacity of the Rig utilized by WRI pursuant to the Drilling Agreement do not permit drilling in accordance with or one or more of the operations or specifications set forth in the Drilling Worksheet, then MOL shall modify the drilling plan contained in the Drilling Worksheet in such a way so as to insure that the requirements of the new drilling plan and drilling specifications are within the capacities and capabilities of the Rig.

Section 3.5. Well Testing and Further Operations.

Section 3.5.1. Well Testing and Evaluation. Within thirty (30) days following the completion of the drilling of any hole during the drilling of the Well, the Operator shall log the temperature profile of the hole and/or conduct injection tests and/or make any other measurements necessary to determine if the hole (1) is likely to be capable of production in commercial quantities (defined as quantities sufficient to provide a positive return after current production and operating costs have been met pursuant to the Regulations and the State Geothermal Lease) and must be flow tested, (2) is presently

incapable of production in commercial quantities but may be made capable of such production with certain further actions which may include the plugging and abandonment of the hole and or (3) is incapable of production in commercial quantities and should be plugged and abandoned. The Operator shall notify BGC of the results of such testing within five (5) days of the completion of such testing and analysis.

Section 3.5.2. Flow Testing. If the Operator determines that the hole is likely to be capable of production in the commercial quantities specified, then the notice delivered pursuant to Section 3.5.1 hereof shall contain the approximate start date of the three-week flow test, to be conducted by Geothermex, such date to be within thirty (30) days of the giving of such notice. The Operator shall also direct or retain Geothermex to analyze and interpret the results from the flow test. Immediately following the conclusion of the flow test and the analysis of the data by Geothermex, the Operator shall determine if (1) the hole is capable of production in commercial quantities, (2) the hole is presently incapable of production in commercial quantities but may be capable of such production and further work should be performed on such hole, or (3) the hole is incapable of production in commercial quantities and should be plugged and abandoned. The Operator shall notify BGC of such determination and provide BGC with a copy of Geothermex's report on the flow test within one (1) week of Geothermex's completion of the flow test and analysis of the data.

Section 3.5.3. Potentially Productive Hole; Additional Actions. If under either Sections 3.5.1 and 3.5.2 hereof the Operator determines that the hole is presently incapable of production in commercial quantities but may be capable of such production with further actions, the Operator (1) may take certain further actions as described hereinbelow, (2) shall describe such further actions, if any, in the notice delivered to BGC as required hereunder and (3) shall promptly execute such further actions, working in good faith, diligently and in a continuous fashion until the described actions have been completed. Such further actions may include, but are not limited to, the plugging and abandonment of such hole drilled pursuant to Section 3.4, and the drilling of a new hole within the Prospect Area; the drilling of a sidetracked leg from the hole; the perforation of the hole; or the injection of fluids into the hole. If the Operator chooses to drill a new hole, such new hole shall be

drilled in accordance with the terms and conditions substantially similar to those set forth herein regarding drilling of the Well. Following the completion of such further actions, the Operator shall again complete all tasks specified in this Section 3.5 with respect to such actions, including, but not limited to, testing, analysis and related determination of productive capacity as set forth in Sections 3.5.1 and 3.5.2 hereof.

Section 3.5.4. Unproductive Hole. If under either Section 3.5.1 or 3.5.2 of this Agreement the Operator determines that the hole is incapable of production in commercial quantities and should be plugged and abandoned, the Operator shall include with the notice delivered to BGC all information gathered during the drilling and preliminary testing of the hole, which shall include but not be limited to: (i) drilling logs, (ii) geology and lithology data and reports, (iii) temperature surveys, (iv) spinner surveys, (v) fluid chemistry data and reports, and (vi) injection data and reports.

Section 3.6. Abandonment and Transfer of an Unproductive Hole to BGC. If after the Operator takes all further actions it deems desirable pursuant to Section 3.5.3 hereinabove if any, and notifies BGC that the Operator has determined that the hole is incapable of production in commercial quantities and should be plugged and abandoned, BGC may elect to acquire any and all rights the Operator or the Drilling Partnership may have to the hole, in which case BGC shall notify the Operator of its desire to acquire the hole within fourteen (14) days of receipt of Operator's notice to BGC of Operator's intention to plug and abandon such hole and Operator's completion of any and all further actions it deems desirable pursuant to Section 3.5.3 hereof.

If BGC elects to acquire the hole, (1) BGC shall cause the Operator to be released from all bonds with respect to the hole, and (2) the Operator in its capacity as Managing Partner or directly as the case may be, shall assign to BGC, without warranty of title, all of its right, title and interest in the hole, with the result that BGC shall thereafter be liable for all costs and expenses with respect to the hole, including, without limitation, all costs and expenses related to the abandonment thereof and all recording costs attendant to the transfer of such interests.

If BGC does not elect to acquire the hole in accordance with this Section 3.6, the Operator shall plug and abandon the hole in accordance with such specifications as may be in effect or subsequently adopted by the State of Hawaii and shall restore the drill site to its approximate original condition and assign to BGC, without warranty of title, all of its right, title and interest in the hole.

Upon completion of the actions described in this Section 3.6 relating to all the holes drilled in the Area of Mutual Interest, this Agreement and all agreements executed pursuant hereto, including the Sublease, shall terminate.

Section 3.7. Additional Wells. Notwithstanding the provisions of Section 3.5 hereof which govern the drilling of the Well, following the completion of the Well, the Operator may elect to drill additional wells, in which case the Operator shall notify BGC of such election within thirty (30) days of the giving of notice for such producing well pursuant to Section 3.5.2 hereof. The drilling of each such additional well shall follow the same time table as that set forth in Article III hereof except that the Operator shall submit all necessary permit applications and sixty (60) days of the notice given BGC pursuant to this Section 3.7, and the Operator need not apply for an extension of the State Geothermal Lease unless such lease has less than 450 days remaining.

Section 3.8. Pipeline Easement. The Operator shall use its best efforts, prior to attempting to obtain the Bank Financing, as defined in Section 4.1 hereof, to obtain a pipeline easement (the "Pipeline Easement") to the Lani-Puna VI Well from the Generation Facility for purposes of utilizing a pipeline from the Generation Facility to the Lani-Puna VI Well.

ARTICLE IV

PRODUCTION

Section 4.1. Determination of Steam/Hot Water Sales to Third Parties vs. Electrical Generation. Within ninety (90) days following the completion of the final well drilled pursuant to Article III hereof, the Operator shall determine if it is economically viable to construct and operate the Generation Facility and notify BGC of such

determination. The availability of bank financing on commercially reasonable terms for the entire construction cost and permanent financing (the "Bank Financing") of the Generation Facility, with recourse only to such facility, the Well and any additional wells and the Lani-Puna VI Well presently held by BGC, and BGC and the Operator, or if an affiliate of the Operator shall enter into the Partnership Agreement, said affiliate shall be a necessary condition to a favorable determination of economic viability.

Section 4.2. Steam/Hot Water Sales to Entities Other Than the Applicable Partnership. If the Operator determines that the Generation Facility is not economically viable, the Operator shall sell the steam and or hot water production; provided, however, the Operator shall not enter into any agreements to design, construct or operate a facility similar to the Generation Facility or otherwise hold any interest either directly or through an affiliate in a generation facility that would purchase steam and or hot water produced from the Area of Mutual Interest without the consent of BGC which consent may be withheld for any reason at BGC's sole discretion.

Section 4.3. Partnership.

Section 4.3.1. The Generation Facility. If the Operator determines that the Generation Facility is economically viable, the Operator and BGC shall form, pursuant to Section 4.3.2 herein, either the Generation Partnership or the Generation Limited Partnership, which entity is referred to in this Article IV as the "Partnership", to design, develop, finance, construct and operate the Generation Facility. The Partnership shall purchase steam and or hot water from the Drilling Partnership(s) or the Operator, as the case may be, or other parties producing steam or hot water from wells within the Area of Mutual Interest developed pursuant to Article III hereof, and shall sell the generated electricity to Hawaii Electric Light Company, Inc. ("HELCO") or other utilities or consumers upon terms and conditions to be mutually agreed upon by MOL and BGC, and set forth in the Partnership Agreement. The Partnership shall appoint Geothermex as its agent to design, construct and manage the Generation Facility pursuant to an Operations Agreement in substantially the form attached hereto as Exhibit "H" and incorporated herein by reference. In addition, if nonrecourse financing is available, the Partnership may drill for Geothermal Resources for its own account.

Section 4.3.2. Determination of Form of Partnership. Whether the Operator (i) elects to raise the Funds through the formation of one or more Drilling Partnerships pursuant to Section 3.3.1 hereof, or (ii) the Operator elects to raise the Funds hereof through an equity offering or other corporate capital raising pursuant to Section 3.3.2 then BGC and MOL shall execute either (x) the Generation Limited Partnership Agreement in substantially the form attached hereto as Exhibit "G" and form the Generation Limited Partnership or (y) the Generation Partnership Agreement in substantially the form attached hereto as Exhibit "F" and form the Generation Partnership, in either case as determined by BGC in its sole and absolute discretion. In any event, MOL and the Operator if MOL shall not be the Operator, shall indemnify, defend and hold harmless BGC, Barnwell, all subsidiaries of Barnwell (the "Subsidiaries") and the officers and directors of BGC, Barnwell and the Subsidiaries (the "Indemnified Parties") from and against any and all liabilities, claims, costs, damages or other amounts asserted against any or all of the Indemnified Parties by any offerees or purchasers of any securities of MOL, the Operator, the Drilling Partnership(s), or any affiliates thereof.

Section 4.3.3. Capital Contributions. The Operator and BGC shall each make capital contributions in cash to the Partnership in an amount to be agreed upon, depending upon the size of the Generation Facility, but in any event not to exceed $600,000. Notwithstanding the above, BGC may contribute the Lani-Puna VI Well in satisfaction of its capital contribution and in such event, shall be credited with a capital contribution in the amount of $600,000. The Operator however, shall have the right not to accept the Lani-Puna VI Well, if the Operator is unable to obtain the Pipeline Easement. If the Pipeline Easement is obtained, the Pipeline Easement will be contributed to the Partnership in addition to the $600,000 cash as the Operator's Initial Capital Contribution.

Section 4.3.4. Conditions to Formation of the Applicable Partnership. BGC and MOL shall not be obligated to execute either the Generation Partnership Agreement or the Generation Limited Partnership Agreement unless (1) no decision or order of any court or agency shall be in effect which would in any material aspect restrain, prohibit, or interfere with or prevent the realization of the full economic benefit anticipated by BGC and MOL with respect to the Generation Facility and the

transactions contemplated herein; (2) BGC and MOL shall have obtained all necessary corporate approvals, including but not limited to the approvals of their respective Boards of Directors; (3) Geothermex shall be willing to serve as the Operator under the Operations Agreement; (4) the Bank Financing shall have been obtained; and (5) the Pipeline Easement shall have been obtained.

Section 4.4. Lani-Puna VI Sublease. In connection with the formation of the Partnership, if BGC contributes the Lani-Puna VI Well to the Partnership in accordance with Section 4.3.3 above, BGC and the Partnership shall enter into the Lani-Puna VI Sublease pursuant to which BGC shall sublease to the Partnership a portion of the State Geothermal Lease conveying the mineral interests to those parcels identified in Schedule D attached hereto and incorporated herein by reference, as necessary to operate the Lani-Puna VI Well as contemplated by the Partnership Agreement. Notwithstanding anything to the contrary contained herein, BGC shall be under no obligation to execute the Lani-Puna VI Sublease unless and until the Partnership shall be formed and the capital contributions described in Section 4.3.3 of this Agreement have been made by both BGC and MOL.

ARTICLE V

EVENT OF DEFAULT

Section 5.1. Existence of an Event of Default. Breach by MOL or BGC of any provision of this Agreement or default in the performance of any duty or responsibility of MOL or BGC hereunder reasonably capable of observance or performance and the failure of said party to cure such breach or default within fifteen (15) days of receipt of notice pursuant to this Section 5.1, shall constitute an Event of Default hereunder. Upon determination by the non-defaulting party that a default or breach has occurred, said non-defaulting party shall notify the defaulting party of the existence of such default or breach, including in the notice a schedule setting forth the action or inaction that gave rise to such default or breach. Said defaulting party shall then have fifteen (15) days to cure such default or breach. Notwithstanding the foregoing, no Event of Default shall be deemed to have occurred if a default cannot be practicably be cured within said fifteen (15) day cure period and the defaulting party shall have agreed in writing to proceed

diligently to cure such default and the undertaking shall be reasonably acceptable to the nondefaulting party, provided, further, that said default shall, in any event, be cured with one (1) year of the defaulting party's receipt of the original notice of default.

Section 5.2. Termination of Agreement. If an Event of Default exists as described in Section 5.1 above, the non-defaulting party may terminate this Agreement by delivering written notice to the defaulting party, and all agreements executed pursuant thereto shall thereupon terminate, including, but not limited to, the Sublease.

ARTICLE VI

ACCESS, CONFIDENTIALITY, AND DATA

Section 6.1. Access. BGC and MOL shall have access to all geological and geophysical maps, data and information related to the Area of Mutual interest held by the other. Such information includes, but is not limited to, temperature surveys, flow tests, engineering reports, well construction and fluid chemistry datas and reports. BGC and MOL shall permit the other to have access to any such data or information in its possession or in the possession of its consultants. BGC and MOL shall each have physical access to the Prospect Area.

Section 6.2. Confidentiality. BGC and MOL shall keep secret and confidential, and shall use reasonable efforts to cause its employees and other representatives to keep secret and confidential, during the term of this Agreement and for three years thereafter, all information described in Section 6.1 hereof, or otherwise disclosed to or acquired by such party in connection with the transactions contemplated by this Agreement; provided, however, that such restrictions shall not apply to any such information that (1) becomes generally available to the public other than as a result of disclosure by BGC and MOL or an employee or other representative thereof, (2) was available to BGC and MOL on a nonconfidential basis prior to its disclosure pursuant hereto, (3) becomes available to BGC or MOL on a nonconfidential basis or an employee or other representative thereof, (4) is required to be disclosed by laws, rules, or regulations of any governmental authority or any stock exchange on which securities if such party or an affiliate thereof may be traded, or (5) is provided to a prospective purchaser of a party's

interest in the State Geothermal Lease, to a lender, or to a party pursuant to a sale, transfer, or encumbrance permitted hereby, but only if and to the extent such prospective purchaser or lender agrees to be bound by the other provisions of this Section 6.2.

ARTICLE VII

REPRESENTATIONS AND WARRANTIES OF MOL

MOL hereby represents and warrants as follows, and the correctness of such representations and warranties constitute a condition precedent to BGC's obligations hereunder:

Section 7.1. MOL's Organization and Good Standing. MOL is a corporation duly organized, validly existing and in good standing under the laws of the State of Kentucky.

Section 7.2. Authorization; Execution and Delivery. MOL has all requisite corporate power to execute, deliver and perform its obligations under this Agreement. The execution, delivery and performance of this Agreement and the consummation of the transactions contemplated hereby have been duly approved and authorized by all requisite corporate action of MOL and this Agreement constitutes the legal, valid and binding obligation of MOL, enforceable against MOL in accordance with its terms except as such enforceability may be limited by applicable bankruptcy, insolvency, reorganization, moratorium, or other similar laws affecting the rights of creditors generally or the application of general principles of equity regardless of whether in a proceeding at law or in equity.

Section 7.3. No Conflict. Neither the execution, delivery or performance of this Agreement by MOL and the consummation of the transactions contemplated hereby will conflict with or result in a breach of any of the terms, conditions or provisions of the Articles of Incorporation or By-Laws of MOL.

Section 7.4. Securities Laws Matters. In connection with the raising of funds, including but not limited to, the Funds, to perform its obligations hereunder, MOL will comply with any and all applicable laws, including, but not limited to, state and federal securities

laws, and will not represent or imply in any manner or fail to correct any representation that BGC is a co-venturer or partner with MOL in the transactions contemplated hereby.

Section 7.5. No Brokers. No broker, finder, agent or investment banker engaged by MOL is entitled to any brokerage or finder's fee in connection with the transactions contemplated by this Agreement, provided, however, that MOL shall not be precluded from engaging, at its own expense, one or more registered broker-dealers in connection with raising the Funds specified in Section 3.5.1 hereof.

ARTICLE VIII

REPRESENTATIONS AND WARRANTIES OF BGC

BGC hereby represents and warrants as follows, and the correctness of such representations and warranties constitute a condition precedent to MOL's obligations hereunder:

Section 8.1. BGC's Organization and Good Standing. BGC is a corporation duly organized, validly existing and in good standing under the laws of the State of Delaware.

Section 8.2. Authorization; Execution and Delivery. BGC has all requisite corporate power to execute, deliver and perform its obligations under this Agreement. The execution, delivery and performance of this Agreement and the consummation of the transactions contemplated hereby have been duly approved and authorized by all requisite corporate action of BGC and this Agreement constitutes the legal, valid and binding obligation of BGC, enforceable against BGC in accordance with its terms except as such enforceability may be limited by applicable bankruptcy, insolvency, reorganization, moratorium, or other similar laws affecting the rights of creditors generally or the application of general principles of equity regardless of whether in a proceeding at law or in equity.

Section 8.3. No Conflict. Neither the execution, delivery and performance of this Agreement by BGC and the consummation of the transactions contemplated hereby will conflict with or result in a breach of any of

the terms, conditions or provisions of the Articles of Incorporation or By-Laws of BGC.

Section 8.4. No Brokers. No broker, finder, agent or investment banker engaged by BGC is entitled to any brokerage or finder's fee in connection with the transactions contemplated by this Agreement.

ARTICLE IX

MISCELLANEOUS

Section 9.1. Assignment. BGC and MOL shall have the right to assign any or all of its working interest or royalty interest or any portion thereof in the lands within the Area of Mutual Interest to any other person; provided however, the Operator may not assign any interest or delegate its duties hereunder without the prior written consent of BGC which it may be withhold for any reason in its sole discretion.

Section 9.2. No Third-Party Beneficiaries; Binding Nature. Nothing in this Agreement (express or implied) is intended or shall be construed to confer upon any person or entity not a party hereto any right, remedy, or claim under or by reason of this agreement. Except as expressly provided herein, the rights and duties of BGC and MOL hereunder are not assignable. Subject to the prior provisions of this Section 9.2, this agreement shall be binding upon and shall inure to the benefit of the parties hereto and their respective successors and assigns.

Section 9.3. Entire Agreement. This Agreement constitutes the entire agreement between the parties hereto pertaining to the subject matter hereof and supersedes all prior and contemporaneous agreements and understandings of the parties in connection therewith.

Section 9.4. Construction. In case any one or more of the covenants, agreements, or provisions hereof shall be invalid, illegal, or unenforceable in any respect, the validity of the remaining covenants, agreements, or provisions hereof shall be in no way affected, prejudiced, or disturbed thereby. This Agreement shall be governed by and construed in accordance with the laws of the State of Hawaii. BGC and MOL hereby submit themselves to the nonexclusive jurisdiction of the United States District Court for the District of Hawaii and the Circuit

Courts of the First Circuit, State of Hawaii with respect to any matter arising out of this agreement or the transactions contemplated hereby.

Section 9.5. Arbitration. Any dispute over whether the schedule or performance requirements set forth in Article III or IV shall have occurred or been met shall be referred to arbitration as provided in this Section 9.5. Either party hereto may commence such arbitration by notice (the "Original Notice") to the other party, which Original Notice shall name an arbitrator, who shall be an engineer or geologist, or other professional experienced in geothermal exploration and development or a firm composed of such professionals. Within fifteen (15) days following the Original Notice, the party(s) receiving such notice may designate a second arbitrator, who also shall be an engineer or geologist, or other professional experienced in geothermal exploration and development or a firm composed of such professionals, by notice (the "Response Notice") to such first party, and the arbitrators designated in the Original Notice and the Response Notice shall designate a third arbitrator, who also shall be an engineer or geologist or other professional experienced in geothermal exploration and development, or a firm composed of such professionals; provided, however, that if the party receiving the original Notice shall not send a Response Notice within such 15-day period, then the arbitration shall proceed before a single arbitrator, who shall be the arbitrator designated in the Original Notice; and provided further that if two arbitrators shall be designated but shall not agree on a third arbitrator within fifteen (15) days following the Response Notice, then any party involved in such dispute may petition the United States District Judge for the District of Hawaii then senior in service to designate such third arbitrator. The arbitrators shall evaluate whether the schedule or performance requirements in question shall have occurred or been met, and in this regard each party shall grant each such arbitrator access to all information in its possession with respect to the Area of Mutual Interest, operations thereon and the transactions contemplated by this Agreement. The decision of any two such arbitrators (or if there is only one arbitrator, such arbitrator) shall be final and binding on all parties involved in the dispute. The costs and expenses of the arbitration shall be borne equally by the party sending the Original Notice on the one hand and the party receiving the Original Notice on the other.

Section 9.6. Notices. All notices, consents, approvals, requests, demands, or other communications required or permitted to be given hereunder shall be in writing, shall be given by certified mail, return receipt requested, postage prepaid, or by prepaid telegram with confirmation of delivery obtained, and shall be deemed to have been duly given five (5) days after transmittal of such notice to the address specified below:

If to Barnwell Geothermal Corporation:

Barnwell Geothermal Corporation
2828 Paa Street, Suite 2085
Honolulu, Hawaii 96819
Attention: Dr. Martin L. Jokl

If to Morgan Oil, Ltd.:

Morgan Oil, Ltd.
Route 6, Box 8
Manchester, Kentucky 40962
Attention: Mr. Charles L. Culton

Either party hereto shall have the right to change its address for notice hereunder from time to time to such other address within the United States of America as may hereafter be furnished in writing by such party pursuant to the terms of this Section 9.6.

Section 9.7. Further Assurances. Each party hereto from time to time shall do and perform such further acts and execute and deliver such further instruments, assignments, and documents as may be required or reasonably requested by the other party to establish, maintain, or protect the respective rights and remedies of the parties and to carry out and effect the intentions and purpose of this Agreement.

Section 9.8. Rights Cumulative. Subject to the provisions of Section 9.5, the rights and remedies granted hereunder shall not be exclusive rights and remedies but shall be in addition to all other rights and remedies available at law or in equity.

Section 9.9. Amendment; Waiver. This Agreement may be modified or amended at any time, but only by a writing signed by all parties hereto. The failure of any party hereto to insist upon strict performance of any provision shall not constitute a waiver of, or estoppel against asserting, the right to require such performance

in the future, nor shall a waiver or estoppel in any one instance constitute a waiver or estoppel with respect to a later breach of a similar nature or otherwise.

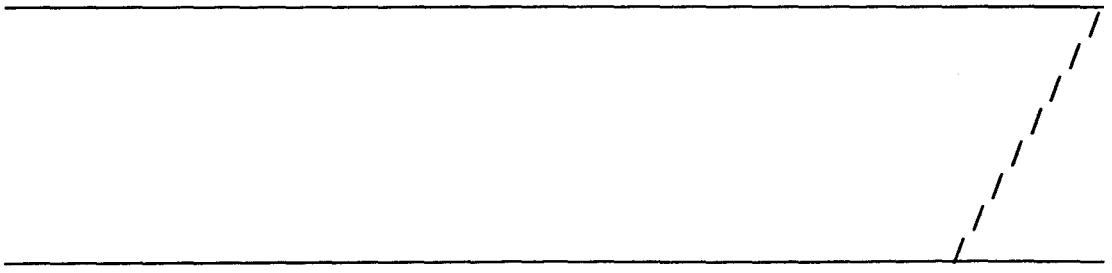
Section 9.10. Delays and Extensions of Time. If the Operator is delayed at any time in the performance of any of its duties, responsibilities and obligations set forth in Sections 3.5, 3.6 relating to drilling and development operations hereof by virtue of force majeure, by labor disputes, fire, delay in transportation, unavoidable casualties, or any other reasons or causes whatsoever beyond the Operator's control, any duties, responsibilities and obligations affected thereby shall be deemed amended to extend for a reasonable period of performance for completion of such duties, provided in the reasonable judgment of BGC, Operator is working diligently and in good faith to complete its obligations under Sections 3.5, 3.6, responsibilities and obligations taking into account the effect of such event causing Operator's delay.

Section 9.11. Internal References. Unless otherwise specified, all references in this agreement to "Articles" and "Sections" are to Articles and Sections of this Agreement, and all references to "Exhibits" are to Exhibits attached hereto, which are made parts hereof for all purposes.

Section 9.12. Counterpart Execution. This agreement may be executed in a number of counterparts, each of which shall have the force and effect of an original although constituting but one instrument for all purposes.

Section 9.13. Additional Obligations. The parties hereto acknowledge that no party hereto may enter into any obligation binding on any other party, other than as provided for and contemplated in this Agreement, without first obtaining the consent of such other party.

Section 9.14. Headings. Headings and titles herein are for the convenience of the parties hereto only,



and shall in no way limit, define or otherwise affect the provisions hereof.

IN WITNESS WHEREOF, the undersigned parties hereto have executed this Agreement as of the date written first above.

BARNWELL GEOTHERMAL CORPORATION

By _____
Martin L. Jokl
President

MORGAN OIL, LTD.

By _____
Charles L. Culton
President

List of Exhibits

A	State Geothermal Lease
B	Sublease
C	Drilling Worksheet
D	Well Testing Program
E	Drilling Agreement
F	Generation Partnership Agreement
G.	Generation Limited Partnership Agreement
H.	Operations Agreement

EXHIBIT "A"

RECORDATION REQUESTED:

AFTER RECORDATION, RETURN TO:

RETURN BY: MAIL ( ) PICKUP ( )

STATE OF HAWAII

DEPARTMENT OF LAND AND NATURAL RESOURCES

GEOTHERMAL RESOURCES MINING LEASE NO. R-3

between

STATE OF HAWAII

and

BARNWELL GEOTHERMAL CORPORATION,
a Hawaii corporation

(Geothermal Lease-May, 1981)

STATE OF HAWAII

DEPARTMENT OF LAND AND NATURAL RESOURCES

GEOTHERMAL RESOURCES MINING LEASE

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STATE OF HAWAII

DEPARTMENT OF LAND AND NATURAL RESOURCES

GEOTHERMAL RESOURCES MINING LEASE NO. R-3

THIS INDENTURE OF LEASE, made this 10th day of August, 1981, pursuant to Chapter 182, Hawaii Revised Statutes, and the rules and regulations promulgated thereunder, by and between the STATE OF HAWAII, by its Board of Land and Natural Resources, hereinafter called the "Lessor", and BARNWELL GEOTHERMAL CORPORATION, a Hawaii corporation, whose business and post office address is 2828 Paa Street, Suite 2085, Honolulu, Hawaii 96819, hereinafter called the "Lessee",

W I T N E S S E T H:

1. LEASE

Subject to the provisions of paragraph 23 entitled "No Warranty of Title", Lessor, in consideration of the royalties, rental, and other monetary considerations, agreements and stipulations herein contained, does hereby lease unto the Lessee the right to develop geothermal resources and geothermal by-products in and under that certain parcel of land, hereinafter designated as the "leased lands", identified in Exhibit "A" containing approximately 769.13 acres situated at Puna, Hawaii, as shown on the maps marked Exhibits "B-1", "B-2", "B-3", "B-4" and "B-5", which exhibits are attached and made a part hereof.

The Lessee shall have the sole and exclusive right to drill for, produce and take geothermal resources from the leased lands and occupy and use so much of the surface of

the leased lands as may be reasonably required pursuant to the provisions of section 182-3 of the Hawaii Revised Statutes and section 6.1 of the regulations. Lessee agrees to comply with these provisions and to save and hold the Lessor harmless with respect to the claims made under said statute and regulations by the owners and occupiers of the surface of the leased lands. This Lease does include the right to reinject beneath the leased lands geothermal fluids subject to the prior written approval of the Lessor and upon such terms and conditions as the Lessor considers to be in the public interest and include any other right as may be necessary to produce the geothermal resources. This Lease does not confer upon the Lessee the privilege or right to store hydrocarbon gas beneath the leased lands; nor does this Lease confer upon the Lessee any other privilege or right not expressly given herein.

This Lease is entered into with the agreement that its purposes are and its administration shall be consistent with the principle of multiple use of public lands and resources; this Lease shall allow co-existence of other permits or leases of the same lands for deposits of other minerals under applicable laws, and the existence of this Lease shall not preclude other uses of the leased lands. However, operations under such other permits or leases or other such uses shall not unreasonably interfere with or endanger operations under this Lease, nor shall operations under this Lease unreasonably interfere with or endanger operations under any permit, lease, or other entitlement for use issued or held pursuant to the provisions of any other law. Nor shall this Lease be construed as superseding the authority which the head of any State department or agency

has with respect to the management, protection, and utilization of the State lands and resources under his jurisdiction. The State may prescribe in its rules and regulations those conditions it deems necessary for the protection of resources.

2. RESERVATION TO LESSOR

All rights in the leased lands not granted to the Lessee by this Lease are hereby reserved to the Lessor. Without limiting the generality of the foregoing such reserved rights include:

A. Disposal - If the State owns the surface of the land, the right to sell or otherwise dispose of the surface of the leased lands owned by the State or to sell or dispose of any other resource in the leased lands under existing laws, or laws hereafter enacted subject to the rights of the Lessee under this Lease. Nothing provided herein shall be construed to authorize or provide for the sale or disposition of the surface of reserved or other privately owned lands.

B. Rights-of-way - The right to authorize geological and geophysical explorations on the leased lands which do not interfere with or endanger present operations or reasonable prospective operations under this Lease, and if the State owns the surface of the land the right to grant such easements or rights-of-way for joint or several use upon, through or in the leased lands for steam lines and other public or private purposes which do not interfere with or endanger present operations or reasonable prospective operations or facilities constructed under this Lease. Nothing provided herein shall be construed as a grant or the

right to grant an easement or right-of-way upon reserved or other privately owned lands.

C. Certain Mineral Rights - The right to extract at its sole cost and expense and own oil, hydrocarbon gas, and helium from all geothermal steam and associated geothermal resources produced from the leased lands; provided, however that such extraction and ownership rights shall be exercised by Lessor in such manner as will not unduly interfere with the rights of Lessee under this Lease.

D. Casing - If the State owns the surface of the land, the right to acquire the well and casing when the Lessee finds only potable water, and such water is not required in lease operations; and

E. Measurements - The right to measure geothermal resources and to sample any production thereof.

3. TERM

A. Primary Term, Extended Term, Maximum Term

This Lease shall be for a term of ten (10) years from and after the effective date of this Lease pursuant to Rule 3.11 of the Regulations, (hereinafter referred to as the "primary term"), and for so long thereafter as geothermal resources are produced or utilized in commercial quantities, provided that the maximum term of this Lease shall not exceed sixty-five (65) years; provided, however, that if the primary term or the maximum term for geothermal leases should be extended by statute, retroactively, such extended terms shall be applicable to this Lease, or should said terms be extended generally by statute, such extended terms may be made applicable to this Lease upon such other terms and conditions as the Board may determine. Production or uti-

lization of geothermal resources in commercial quantities shall be deemed to include the completion of one or more wells capable of producing geothermal resources for delivery to or utilization by a facility or facilities not yet installed but scheduled for installation not later than fifteen (15) years from the date of commencement of the primary term of this Lease.

B. Extension of Lease Beyond Primary Term by Drilling Operations

If at the expiration of the primary term hereof geothermal resources in commercial quantities are not being produced from the leased lands, but the Lessee is actively engaged in drilling operations designed to drill below the depth of 1,000 feet, or, to a production zone at a lesser depth in a diligent manner, this Lease shall be continued for so long thereafter as such operations are continued with no cessation thereof for more than 180 days, but not to exceed a period of five (5) years, and if such drilling operations are successful, as long thereafter as geothermal resources are being produced or utilized in commercial quantities except for the sixty-five (65) year limit provided above.

C. Shut-in Production

If the Lessee has voluntarily shut-in production for lack of a market, but is proceeding diligently to acquire a contract to sell or to utilize the production or is progressing with installations needed for production, this Lease shall continue in force upon payment of rentals for the duration of the primary term or for five (5) years after shut-in, whichever is longer. The Chairman shall continue to review this Lease every five (5) years until production

in commercial quantities occurs or this Lease is terminated by Lessor for Lessee's lack of due diligence or is surrendered by the Lessee. When production and sale or utilization of geothermal resources in commercial quantities has been established, the term of this Lease shall continue as provided in Paragraph A of this paragraph 3.

D. Drilling or Reworking Operations After Cessation of Production

If production of geothermal resources should cease by reason of a decline in the productive capacity of existing wells after expiration of the primary term, or before the end of the primary term if production has commenced, this Lease shall continue so long as Lessee actively and continuously engages in drilling or reworking operations which shall be commenced within One Hundred Eighty (180) days after cessation of production. Continuous drilling or reworking operations shall be deemed to have occurred where not more than One Hundred Eighty (180) days elapse between cessation of operations on one well and commencement of operations on the same or another well. If such operations are continued and if they are successful, this Lease shall continue as long thereafter as geothermal resources are being produced in commercial quantities, except for the sixty-five (65) year limit provided above.

4. RENTALS

A. Amount and Time of Payment

The first year's annual rent shall be paid pursuant to Rule 3.12. Thereafter, Lessee shall pay to Lessor at the Department, in advance each year on or before the anniversary date hereof, the annual rental of ONE AND NO/100---- ---------- DOLLARS ($1.00----------)

per acre or fraction thereof, on the leased lands during the life of this Lease, or a total of $770.00 per annum.

B. Credits Against Royalties

The annual rental due and paid for each year shall be credited against any production royalties due and accrued during the same year. Annual rentals paid for a given year shall not be credited against production royalties due in future years.

5. ROYALTIES

A. For Period of Initial Thirty-five Years

For the primary ten (10) year term and during the first twenty-five (25) years thereafter Lessee shall pay to Lessor the following royalties on production measured and computed in accordance with the regulations:

1. Geothermal Resources (Excluding Geothermal By-products)
A royalty of ten (10%) percent of the gross proceeds received by the Lessee from the sale or use of geothermal resources produced from the leased lands and measured at the wellhead without any deduction for treating, processing and transportation cost, notwithstanding Rule 3.13b. of Regulation 8.

2. Geothermal By-Products
Five (5%) percent of the gross proceeds received by the Lessee from the sale of any such by-product produced under this Lease, including demineralized or desalted water, after deducting the treating, processing and transportation costs incurred.

In the event that geothermal resources hereunder is not sold to a third party but is used or furnished to a plant owned or controlled by the Lessee, the gross proceeds of such production for the purposes of computing royalties hereunder shall be that which is reasonably equal to the gross proceeds being paid to other geothermal producers for geothermal resources of like quality under similar conditions

without deducting any treating, processing and transportation costs incurred, notwithstanding Rule 3.13b. of Regulation 8.

No payment of royalty will be required on water if it is used in plant operation for cooling or generation of electric energy or is reinjected into the sub-surface. No royalty shall be paid for geothermal by-products used or consumed by Lessee in his production operations.

Gross proceeds shall not be deemed to include excise, production, severance or sales taxes or other taxes imposed on the Lessee by reason of the production, severance or sale of geothermal resources or geothermal by-products.

B. Readjustment After Thirty-five Years

Royalty rates on geothermal resources and geothermal by-products shall be readjusted, subject to the limitations specified in the regulations and in accordance with the procedures prescribed therein at the expiration of the thirty-fifth (35th) and fiftieth (50th) years of the Lease; provided, however, that such readjustment shall be only as to the royalty rate and not as to the basis for determining payment to the Lessor.

If the royalty rates for any ensuing period have not been determined prior to the expiration of the preceding period, the Lessee shall continue to pay the royalty rates effective for the previous period, but the Lessee shall, within thirty (30) days after the new royalty rates have been so determined, pay the deficiency, if any.

C. Deadline for Royalty Payments

The Lessee shall make payments of royalties to the Lessor within thirty (30) days after the end of each calendar month following such production and accompany such payment

with a certified true and correct written statement by the Lessee, showing the amount of geothermal resource and geothermal by-product produced, sold, used and/or otherwise disposed of and the basis for computation and determination of royalties. The Lessee shall furnish such other data as may be necessary to enable the Lessor to audit and verify all royalties due and payable to the Lessor.

D. Royalties-Production (absolute open flow potential)

If the Lessee supplies steam to any electrical generating facility from wells on both the leased lands and other lands and there is producible from all such wells in aggregate a quantity of steam greater than the maximum quantity utilizable by said electrical generating facility, Lessee agrees to produce and sell or use steam from the leased lands in a proportion no less than the proportion that the absolute open flow potential (the absolute open flow potential as used herein is the rate of flow in pounds of steam per hour that would be produced by a well if the only pressure against the face of the producing formation in the well bore were atmospheric pressure) of the wells on the leased lands bears to the total absolute open flow potential of all such wells from which Lessee supplies steam to such electrical generating facility. For purposes of this section it shall be deemed that the Lessee supplies steam from a well to an electrical generating facility when such well is capable of producing geothermal resources in commercial quantities to such facility. The absolute open flow potential of all such wells whether on the leased lands or other lands shall be determined by the Lessor and shall be based upon tests performed by the Lessee as prescribed by the Lessor. In this regard, Lessee shall,

upon completion of each of such wells, and prior to the placing of such wells on commercial production, perform, and deliver to the Lessor the results of, the following tests:

1. Pressure Test - Pressure-buildup tests to determine static reservoir pressure and well bore conditions. If pressure-buildup tests are based on shut-in wellhead data, then static well bore temperature surveys must also be conducted:

2. Isochronal Flow Tests - Isochronal flow tests or two rate flow tests to establish a back pressure curve and the absolute open flow potential;

3. Other Tests-Static Reservoir Pressure - Other tests as deemed to be necessary by the Lessor.

After commencement of commercial production from each of such wells, Lessee shall annually, or more frequently if requested by the Lessor, determine static reservoir pressure and complete any other tests as specified by the Lessor.

E. Geothermal By-Products Testing

The Lessee shall furnish the Chairman the results of periodic tests showing the content of by-products in the produced geothermal resources. Such tests shall be taken as specified by the Chairman and by the method of testing approved by him, except that tests not consistent with industry practice shall be conducted at the expense of the Lessor.

F. Interest and Penalties

1. Interest - It is agreed by the parties hereto that any royalties, rentals, or other monetary considerations arising under the provisions of this Lease and not paid when due as provided in this Lease, shall bear interest from the

day on which such royalties, rentals, or other monetary consideration were due at the rate of 12% per annum or such higher rates as may be permitted by law until such royalties, rentals, or other monetary considerations shall be paid to the Lessor.

2. Penalty - It is agreed by the parties hereto that any royalties, rentals or other monetary considerations arising under the provisions of this Lease and not paid when due as provided in this Lease, shall be subject to a five (5%) percent penalty on the amount of any such royalties, rentals, percentage of net profits, or other monetary considerations arising under the provisions of this Lease.

3. Definition of Royalties, etc. - It is agreed by the parties hereto that, for the purpose of this section, "royalties, rentals or other monetary considerations arising under the provisions of this Lease and not paid when due" includes but is not limited to any amounts determined by the Lessor to have been due to the Lessor if, in the judgment of the Lessor, an audit by the Lessor of the accounting statement required by paragraph 28 below shows that inaccurate, unreasonable or inapplicable information contained or utilized in the statement resulted in the computation and payment to the Lessor of less royalties, rentals, or other monetary considerations than actually were due to the Lessor.

6. REQUIREMENT TO COMMENCE MINING OPERATIONS

Lessee shall commence mining operations upon the leased lands within three years from the effective date of this Lease, excluding any research period which has been granted; provided, that so long as the Lessee is actively

and on a substantial scale engaged in mining operations on at least one geothermal resources mining lease, the covenant to commence mining operations shall be suspended as to all other leases held by the Lessee, covering lands on the same island.

7. TAXES

A. Real Property Taxes

Lessee shall pay any real property taxes levied on that portion of the surface of the leased lands utilized by Lessee, according to the value allocated thereto by Lessor or other appropriate State or County agency based on the use of the surface of the portion of the land by Lessee and the use of the remainder of the land by others entitled thereto. Lessee shall also pay any real property taxes levied on the structures and improvements placed thereon and utilized by Lessee; provided that all subsurface rights and any geothermal resources underlying the leased lands under this Lease shall be deemed to have only nominal value for real property tax assessment purposes until such time, if any, as specifically authorized by law. If Lessor has exercised its rights under paragraph 2 herein, said taxes shall be prorated according to Lessee's interests.

B. Other Taxes

Royalties paid hereunder shall be in lieu of any severance or other similar tax on the extracting, producing, winning, beneficiating, handling, storage, treating or transporting of geothermal resources or any product into which the same may be processed in the State of Hawaii; nevertheless, if any such tax should be assessed, then such tax shall be deducted from any royalties otherwise due here-

under. As to any and all other taxes of any nature assessed upon geothermal resources or geothermal by-products therefrom or assessed on account of the production or sale of geothermal resources or geothermal by-products from the leased land, Lessor and Lessee each shall bear such tax in proportion to its respective fractional share of the value of such production.

8. UTILITY SERVICE

Lessee shall be responsible for all charges, duties and rates of every description, including water, electricity, sewer, gas, refuse collection or any other charges, arising out of or in connection with Lessee's operations hereunder.

9. SANITATION

Lessee shall keep its operations and improvements in a strictly clean, sanitary and orderly condition.

10. WASTE: USE OF PREMISES

a. Lessee shall not commit, suffer or permit to be committed any waste, nuisance, strip mining or unlawful use of the leased lands or any part thereof.

b. Negligence - Breach - Non-Compliance - Lessee shall use all reasonable precautions to prevent waste of, damage to, or loss of natural resources including but not limited to gasses, hydrocarbons and geothermal resources, or reservoir energy on or in the leased lands, and shall be liable to the Lessor for any such waste, damage or loss to the extent that such waste, damage, or loss is caused by (1) the negligence of Lessee, its employees, servants, agents or contractors; (2) the breach of any provision of this Lease by Lessee, its employees, servants, agents or contractors, or non-compliance with applicable federal, state or county

statutes or rules and regulations; provided, however, that nothing herein shall diminish any other rights or remedies which the Lessor may have in connection with any such negligence, breach or non-compliance. With respect to any other such waste damage or loss, Lessee agrees to indemnify, save the Lessor harmless and, at the option of the Lessor, defend the Lessor from any and all losses, damages, claims, demands or actions caused by, arising out of, or connected with the operations of the Lessee hereunder as more specifically provided under paragraph 16 hereof. Lessee shall not be obligated to defend the Lessor's title to geothermal resources.

11. COMPLIANCE WITH LAWS

Lessee shall comply with all valid requirements of all municipal, state and federal authorities and observe all municipal, state and federal laws and regulations pertaining to the leased lands and Lessee's operations hereunder, now in force or which may hereafter be in force, including, but not limited to, all water and air pollution control laws, and those relating to the environment; provided, however, no revision or repeal of the regulations as defined in paragraph 34 subsequent to the effective date hereof shall change the rental, royalty rate, term, or otherwise substantially change the economic terms under this Lease; provided, further, however, that the State of Hawaii, acting in its governmental capacity, may by such regulations or amendments thereto made at any time regulate the drilling, location, spacing, testing, completion, production, operation, maintenance and abandonment of a well or wells or similar activity

as well as the construction, operation and maintenance of any power plant or other facilities in the exercise of its police powers to protect the public health, welfare and safety as provided in the regulations.

Lessee shall have the right to contest or review, by legal procedures or in such other manner as Lessee may deem suitable, at its own expense, any order, regulation, direction, rule, law, ordinance, or requirement, and if able, may have the same cancelled, removed, revoked, or modified. Such proceeding shall be conducted promptly and shall include, if Lessee so decides, appropriate appeals. Whenever the requirements become final after a contest, Lessee shall diligently comply with the same. Lessee also agrees that in its employment practices hereunder it shall not discriminate against any person based upon race, creed, sex, color, national origin or a physical handicap.

12. INSPECTION OF PREMISES AND RECORDS

Lessor, or persons authorized by the Lessor, shall have the right, at all reasonable times, to go upon the leased lands for the purpose of inspecting the same, for the purpose of maintaining or repairing said premises, for the purpose of placing upon the leased lands any usual or ordinary signs, for fire or police purposes, to protect the premises from any cause whatever, or for purposes of examining and inspecting at all times the operations of Lessee with respect to wells, improvements, machinery, and fixtures used in connection therewith, all without any rebate of charges and without any liability on the part of the Lessor for any loss of occupation or quiet enjoyment of the premises thereby occasioned.

Lessor or its agents may at reasonable times inspect

the books and records of Lessee with respect to matters pertaining to the payment of royalties to Lessor. Complete information shall be made available to Lessor. In addition, qualified representatives and/or consultants designated by Lessor may examine the reports specified in this Lease and all other pertinent data and information regarding wells on the leased lands and production therefrom. In the event of surrender of all or a part of the leased lands Lessee shall furnish Lessor all data with respect to such surrendered lands including interpretations of such data for use in future lease negotiations with third parties. Lessee agrees on written request to furnish copies of such information to Lessor's qualified representatives or consultants.

13. GEOTHERMAL OPERATIONS

Lessee shall carry on all work hereunder with due regard for the preservation of the property covered by this Lease and with due regard to the safety and environmental impact of its operations and in accordance with the following terms and conditions:

A. Removal of Derrick. Lessee shall remove the derrick and other equipment and facilities within sixty (60) days after Lessee has ceased making use thereof in its operations.

B. Operating Sites. All permanent operating sites shall be landscaped or fenced so as to screen them from public view to the maximum extent possible, as required in the discretion of the Department of Land and Natural Resources. Such landscaping or fencing shall be approved in advance by the Lessor and kept in good condition.

C. Site Selection. Prior to commencing a particular operation on the surface of the leased lands, Lessee will

consult with the occupier and submit the details concerning the proposed operation, such as the location or route of any drill site, facility site, installation site, surface area, road, pond, pipeline, power line, or transmission line, as the case may be, to the occupier by certified mail for the occupier's approval. If the occupier does not approve such proposal, occupier will submit within thirty (30) days an alternate written proposal. If occupier does not submit an alternate proposal, Lessee may proceed with its operation as originally proposed, subject to the provisions of paragraph 23. If the occupier and Lessee cannot agree, the matter will be submitted to arbitration.

D. Drilling Operations. All drilling ahd production operations shall be conducted in such manner as to eliminate as far as practicable dust, noise, vibration, or noxious odors. The operating site shall be kept neat, clean and safe. Drilling dust shall be controlled to prevent widespread deposition of dust. Detrimental material deposited on trees and vegetation shall be removed. Lessee will take such steps as may be required to prevent damage to crops. The determination as to what is detrimental will be made by the Lessor.

No well shall be drilled within five hundred (500) feet of any residence or building on the leased lands without first obtaining the occupier's written consent.

In any well drilled by Lessee hereunder sufficient casing shall be set and cemented so as to seal off surface and subsurface waters, any of which would be harmful to agricultural or other operations.

E. Water Quality - Waste Disposal. Lessee shall file with the Lessor a report of any proposed waste discharge.

Wastes shall be discharged in accordance with requirements and prohibitions prescribed by the Lessor. The Lessor and any other state agency having jurisdiction over the affected lands shall also approve the place and manner of such waste disposal.

F. Fish and Game Notice - Interference. Lessee shall communicate with the Division of Fish and Game prior to any operations which may adversely affect fish and wildlife resources. Lessee shall conduct its operations in a manner which will not interfere with the right of the public to fish upon and from the public lands of the State and in the waters thereof or will not preclude the right of the public to use of public lands and waters.

G. Damage to Terrain. Any operations disturbing the soil surface, including road building and construction and movement of heavy equipment in support of or relating to specific geothermal exploration or development activities shall be conducted in such manner as will not result in unreasonable damage to trees and plant cover, soil erosion, or in degradation of waters of the State, including fish and aquatic life habitat. Lessee will conduct its operations in a manner that will not unreasonably interfere with the enjoyment of the leased lands by the occupier or persons residing on or near the leased lands.

H. Pollution. Pollution of the ocean and tidelands, rivers, or other bodies of water, and all impairment of and interference with bathing, fishing, or navigation in the waters of the ocean or any bay or inlet thereof is prohibited, and no brine, minerals, or any refuse of any kind from any well or works shall be permitted to be deposited on or pass into waters of the ocean, any bay or inlet thereof,

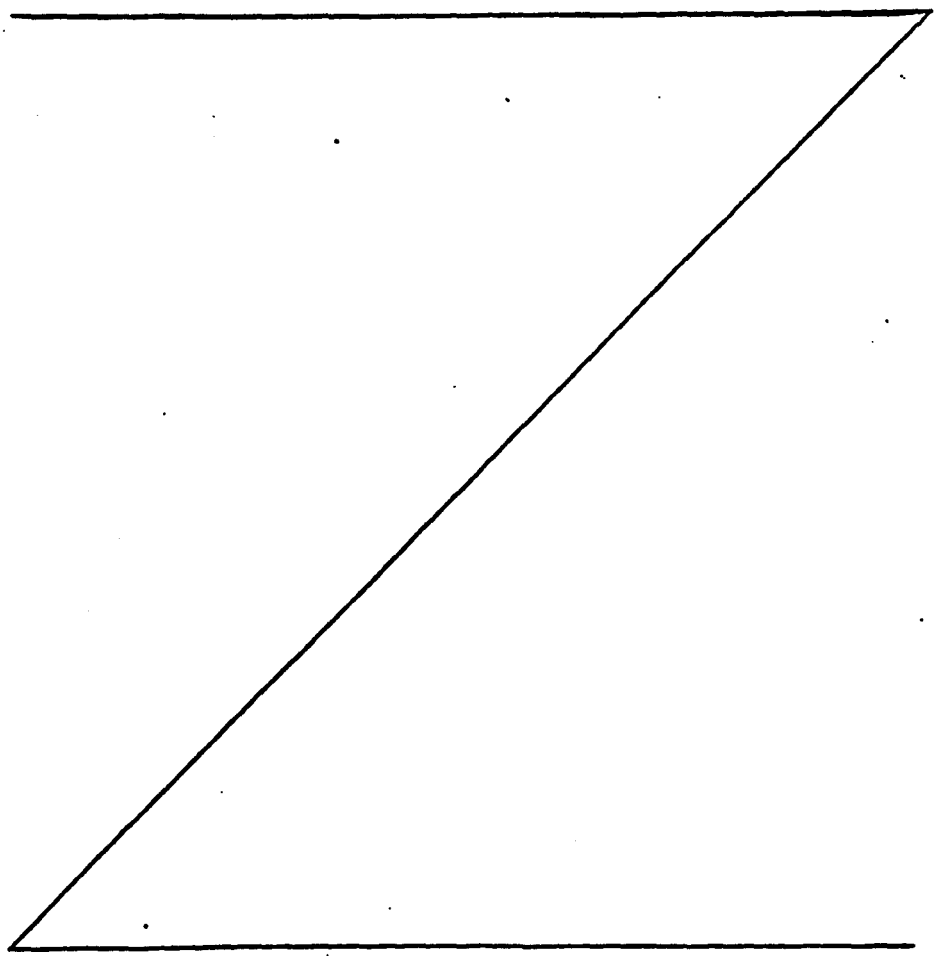
rivers, lakes or other bodies of water, without specific written State authorization.

No Leased Substances which may be produced from any well drilled upon the leased lands shall be blown, flowed, or allowed to escape into the open air or on the ground in such a manner as to create a nuisance, which shall specifically include but not be limited to noise, air or other pollution, and other activities which disturb the occupier's or his Tenant's use of the leased lands. Subject to the foregoing, Lessee may bleed Leased Substances to the atmosphere so long as such operations are lawfully and prudently conducted in accordance with good geothermal drilling and production practices and are not otherwise violative of the provisions of this Lease.

I. Filled Lands. No permanent filled lands, piers, platforms, or other fixed or floating structures in, on, or over any tide and submerged lands covered by this Lease or otherwise available to Lessee shall be permitted to be constructed, used, maintained, or operated without obtaining any and all permits required under applicable State and Federal law, rules and regulations, and complying with all valid ordinances of cities and counties applicable to Lessee's operations, and without securing the written permission of the Lessor specifically authorizing the activity.

J. Road Maintenance. Lessee will take such steps at Lessee's own expense as are necessary to insure that its roads, well sites, plant sites and other operation areas will be kept as dust free as is practicable so that dust will not decrease the market value of adjacent growing crops or interfere with the occupier's or his tenant's uses.

Lessee will use existing roads where such are available for its operations. All roads, bridges and culverts used by Lessee will be maintained by it and roads surfaced or treated in a manner that will prevent dust from interfering with agricultural or residential use of the leased lands. Lessee shall be responsible for the maintenance of and repair of damages caused to roads used by Lessee on or serving the leased lands. The occupier and Lessor and their agents, tenants and licensees shall have the full use of roads constructed by Lessee but shall be responsible for the repair of any unusual damage caused to such roads by their use. In constructing roads, Lessee shall install necessary



culverts or bridges so as not to interfere with the irrigation or drainage of the leased lands.

K. Timber Damaged. In the absence of any agreement to the contrary, timber damaged, destroyed, or used on the leased lands shall be compensated for at market value to the surface owner. Borrow pit material shall not be obtained from the leased lands without permission and payment of market value to the surface owner.

L. Improvements - Protection from Damage. Improvements, structures, telephone lines, trails, ditches, pipelines, water developments, fences, crops and other property of the State or surface owners, other lessees or permittees shall be protected from damage and repaired or replaced by Lessee when damaged by Lessee.

M. Damages - Payment. In the event any buildings or personal property or crops shall be damaged or destroyed because of Lessee's operations on the leased lands, then Lessee shall be liable for all damages occasioned thereby. Lessee in its operations on the leased lands shall at all times have due and proper regard for the rights and convenience, and the health, welfare and safety of the occupier and of all tenants and persons lawfully occupying the leased lands. In the event that Lessee's operations result in any condition, including but not limited to water table or deposition of chemicals, or harmful substances, which adversely affects the continued production of crops or then beneficial uses and purposes of the land, occupier at his option may require Lessee to reimburse the occupier, his tenants and persons lawfully occupying the leased lands as to the affected acreage in accordance with subparagraphs N 1 and 2 of this paragraph 13.

N. Damages to Surface or Condition of Land. Lessee shall pay the surface owner for the surface of each acre of land or fraction thereof utilized, taken or used or rendered substantially unusable by the Lessee in its operations, pursuant to the terms of this Lease, for farming or stock raising operations or other uses or purposes for which the land is then being used or for which the surface owner had made other plans, which shall include, but not be limited to, the lands occupied by drill sites, facility sites, roadways constructed by Lessee, ponds, pipelines, utility lines, power and transmission lines, production facilities, and other facilities and structures, together with other uses of the surface, save and except certain plants and buildings provided for in subparagraph O below, in accordance with one of the following methods to be elected by surface owner.

1. Lessee shall pay the surface owner annually from the date of acquisition a rental equivalent to the fair rental value which is being paid each year for like property.

2. Lessee shall pay surface owner severance damages if any to the surrounding land and purchase the surface acreage required by Lessee for its fair market value with right of surface reverter in the surface owner when no longer utilized by Lessee in its operations.

O. Power Plants. In the event Lessee, or a public utility, pursuant to Lessee's operations hereunder, desires to construct any plant or building site and is required to have fee title for such purpose, then Lessee shall pay occupier the fair market value for the surface of such plant or building site and the severance damages, if any, to the parcel from which such plant or building site is taken.

P. Agreement with Surface Owner. In the event that the Lessor does not own the surface of the leased lands and if the geothermal developer who is responsible for developing the resources on the leased lands enters into a lease with the surface owner, then the provisions of such lease from the surface owner shall supercede the foregoing paragraphs 13.K. through 13.O and 14 relating to surface use, and such paragraphs shall thereafter have no force and effect where it is inconsistent with the lease with the surface owner.

Q. Drilling Mud. Drilling mud shall be ponded in a safe manner and place, and where required by the Lessor, posted with danger signs, and fenced to protect persons, domestic animals, and wildlife. Upon completion of drilling, the mud shall be disposed of, or after drying in place, covered with a protective layer of soil.

Lessee agrees to fence all sump holes and excavations and all other improvements, works, or structures which might interfere with or be detrimental to the activities of the occupier or other adjacent or nearby users of the land, and to build sumps and to take all reasonable measures to prevent pollution of surface or subsurface waters on or in the leased lands. Upon abandonment of any well on the leased lands, or on the termination of this Lease, or upon quitclaim or reverter of any leased land by Lessee, then as to such leased land Lessee shall level and fill all sump holes and excavations shall remove all debris, and shall leave those areas of the leased lands used by Lessee in a clean and sanitary condition suitable for farming or in the condition it was at the inception of this Lease if its use was other than farming, and shall pay the occupier for all damages to occupier's buildings, structures, or other property caused by Lessee.

R. Facility Sites. Areas cleared and graded for drilling and production facility sites shall be kept to a reasonable number and size, and be subject to Lessor's approval.

Unless economic and technological considerations will not permit, wells will be drilled directionally in order to minimize the number of drill sites required. Well sites and facility sites will be shaped and located to the extent practicable to interfere as little as possible with the occupier's operations including the spacing, location and operation of the occupier's improvements, planned and contemplated uses, grading, utility and drainage systems, and roads, and to prevent undue interference or danger to the occupier's or his tenant's farming and other operations. Where economically and technologically feasible, wells shall be drilled directionally from a single well site. Drill sites may also be located on unused portions of the leased lands. The drill sites will not ordinarily exceed five (5) acres in size but will vary in accordance with the number of wells drilled from such site and the amount of production equipment placed thereon. Plant or facility sites will be limited in size to approximately ten (10) acres per site.

S. Construction of Terms. The above are in addition to, and not to be construed as limitations upon, all other rules, regulations, restrictions, mitigation measures and all other measures designed to restrict, limit, modify or minimize the environmental impact of operations carried out pursuant to this Lease as set forth in this Lease.

T. Spacing, Production, Etc. - The Lessor may determine the spacing of wells and the rate of development and production of such wells to prevent the waste of geo-

thermal resources and to promote the maximum economic recovery from, and the conservation of reservoir energy in, each zone or separate underground source of geothermal resources. Such determination shall be based on recognized engineering standards and shall be consistent with prevailing economic and market conditions.

U. Drilling - Notice - Plan - Lessee, before commencing the drilling of a well, shall notify the Lessor of its intention to drill, and such notice shall contain the location and elevation above sea level of derrick, proposed depth, bottom hole location, casing program, proposed completion program and the size and shape of drilling site, excavation and grading planned, and location of existing and proposed access roads. Where the surface of the leased lands is under the jurisdiction of a State agency other than the Department of Land and Natural Resources, Lessee shall provide at the same time such information listed above as is pertinent to that agency.

V. Drilling, etc. - Circulating Medium - All drilling, redrilling, perforating, or work-over operations within the leased lands shall be done with an accepted circulating medium.

W. Generating Plants - Approval - No generating plants, buildings, structures, production equipment, metering systems, pipelines or roads for the production, sale or use of geothermal resources (hereinafter referred to as "geothermal facilities") shall be installed or constructed except on prior Lessor's approval and the approval of any other governmental agency having jurisdiction over such installation or construction. Any contract entered into by Lessee with a Public Utility or any other person or entity for the install-

ation or construction of geothermal facilities shall contain provisions requiring the Public Utility, or other person or entity to obtain the approval of the Lessor and other governmental agencies before installation or construction of geothermal facilities.

14. LIENS

Lessee will not commit or suffer any act or neglect whereby the estate of the Lessor or the surface owner or occupier of the leased lands shall become subject to any attachment, lien, charge or encumbrance whatsoever, and shall indemnify and hold harmless the Lessor, surface owner and occupier, against all such attachments, liens, charges and encumbrances and all expenses resulting from any such act or neglect on the part of the Lessee.

Lessee will, before commencing construction of any improvements or any drilling operations or laying any pipe lines or doing any other work on or within the leased lands, deposit with Lessor, surface owner and occupier of such lands a bond or certificate thereof naming Lessor, said surface owner and occupier as obligees in a penal sum of not less than one hundred per cent (100%) of the cost of such construction, drilling or pipe line work and in form and with surety satisfactory to Lessor, the surface owner and occupier guaranteeing the completion of such work free and clear of all mechanics' and materialmen liens.

15. ASSIGNMENT OR SUBLEASE

Lessee shall have the right to transfer this lease to any person qualified under the applicable law and regulations by assignment, sublease, or other transfer, of any nature including the creation of security interests in Lessee's interest in this Lease and Lessee's rights hereunder,

in whole or in part, and as to all or a part of the leased lands, subject to the approval of the Lessor, which approval will not unreasonably be withheld. Upon approval, Lessor may release the transferor from any liabilities or duties except for any liability or duty which arose prior to such approval.

16. INDEMNITY

The Lessee agrees to hold harmless and indemnify the State of Hawaii and its divisions, departments, agencies, officers, agents and employees, together with the owner or lessee of the surface of the leased lands, if any, from any and all liabilities and claims for damages and/or suits for or by reason of death or injury to any person or damage to property of any kind whatsoever, whether the person or property of Lessee, his agents, employees, contractors, or invitees, or third persons, from any cause or causes whatsoever caused by any occupancy, use, operation or any other activity on the leased lands or its approaches, carried on by the Lessee, his agents, employees, contractors, or invitees, in connection therewith; and the Lessee agrees to indemnify and save harmless the State of Hawaii, the Board, the Chairman, the Department, owner or lessee of the surface if there be one, and their officers, agents, and employees from all liabilities, charges, expenses (including counsel fees) and costs on account of or by reason of any such death or injury, damage, liabilities, claims, suits or losses.

The foregoing indemnity specified in this Lease and in the regulations is not intended to nor shall it be construed to require the Lessee to defend the Lessor's title to geothermal resources and in case of litigation involving the titles of the Lessee and the Lessor, Lessee and the

Lessor will join in defending their respective interests, each bearing the cost of its own defense.

17. LIABILITY INSURANCE

Prior to entry upon the leased lands the Lessee or transferee shall obtain, at its own cost and expense, and maintain in force during the entire term of this Lease, a policy or policies of comprehensive general public liability and property damage insurance from any company licensed to do business in the State of Hawaii covering liability for injuries to persons, wrongful death, and damages to property caused by any occupancy, use, operations or any other activity on leased lands carried on by Lessee or transferee, its agents or contractors in connection therewith, in the following minimum amounts:

a. Comprehensive General Bodily Injury Liability - $300,000.00 each occurrence, $1,000,000.00 aggregate.

b. Comprehensive General Property Damage $50,000.00 each occurrence, $100,000.00 aggregate.

Liability coverage for injury or damage to persons or property caused by explosion, collapse and underground hazards are to be included prior to initiation of operations to drill a well for geothermal discovery, evaluation or production. Lessee shall evidence such additional coverage to the Chairman prior to initiation of drilling operations. If the land surface and improvements thereon covered by this Lease are owned or leased by a person other than the State of Hawaii, the owner and lessee, if any, of the surface and improvements shall be a named insured. The State of Hawaii,

the Hawaii State Board of Land and Natural Resources, the Chairman of the Board of Land and Natural Resources, and the Department of Land and Natural Resources, shall also be named insureds.

No cancellation provision in any insurance policy shall release the Lessee of the duty to furnish insurance during the term of this Lease. A signed and complete certificate of insurance, containing the special endorsement prescribed in the regulations and indicating the coverage required by this paragraph, shall be submitted to the Chairman prior to entry upon the leased lands. At least thirty (30) days prior to the expiration of any such policy, a signed and complete certificate of insurance, indicating the coverage required by this paragraph, showing that such insurance coverage has been renewed or extended, shall be filed with the Chairman.

18. BOND REQUIREMENTS

The Lessee and every assignee, sublessee or transferee hereof shall file with the Board, a bond in the amount of $10,000.00 in a form approved by the Board and made payable to the State of Hawaii, conditioned upon faithful performance of all requirements of Chapter 182, Hawaii Revised Statutes, the regulations thereunder and of this Lease, and also conditioned upon full payment by the Lessee of all damages suffered by the occupiers of the leased lands for which Lessee is legally liable. If the Lessee holds more than one (1) geothermal resources mining lease from the State of Hawaii, it may file with the Board, in lieu of separate bonds for each lease, a blanket bond in the amount of $50,000.00.

19. REVOCATION

This Lease may be revoked by the Board if the Lessee fails to pay rentals and/or royalties when due or fails to comply with any of the other terms of this Lease, law, or regulations, or if the Lessee wholly ceases all mining operations for a period of one year without the written consent of the Board for reasons other than force majeure or the production of less than commercial quantities of geothermal resources or by-products. However, before revocation of this Lease for defaults other than the failure to pay rents and/or royalties when due, the Board shall give the Lessee written notice of the claimed default and an opportunity to be heard within thirty(30) days of such notice. The Lessee shall be allowed sixty (60) days to correct such default or, if the default is one that cannot be corrected within sixty (60) days, to commence in good faith and thereafter proceed diligently to correct such default, following written notice of a determination after hearing by the Board that such default exists. Failure to comply with the foregoing shall be deemed sufficient cause for revocation. Defaults arising because of failure to pay rents and/or royalties when due must be cured within sixty (60) days of a written notice of default; otherwise this Lease may be revoked. In the alternative the Lessee may surrender this Lease as hereinafter provided.

Upon the revocation of this Lease, Lessor shall have the right to retain the improvements or require the Lessee to remove the same and restore the leased lands to a similar condition prior to any development or improvements, to the extent reasonably possible and, upon failure by the Lessee to do so, the Lessor may recover the cost thereof,

in addition to imposing any penalties as provided by law or regulations.

20. SURRENDER

If Lessee has complied fully with all the terms, covenants and conditions of this Lease and the Regulations, Lessee may surrender, at any time and from time to time, this Lease in its entirety or with respect to any portion of the land described in this Lease. For the purposes hereof, if there are no deficiencies with respect to the land to be surrendered pertaining to public health, safety, conservation of resources and preservation of the environment, Lessee will be deemed to have complied fully with all of the terms, covenants and conditions of this Lease and the Regulations if Lessee shall have paid all rents and royalties due hereunder and an additional two years' rent for all of the leased lands or, in the event of a partial surrender, two years' rent prorated by reference to that portion of land described in this Lease which is to be surrendered. No deficiencies shall be deemed to exist unless, within sixty (60) days after delivery of the document of surrender, the Lessor has notified the Lessee in writing of any deficiency claimed to exist. If there are no deficiencies as aforesaid, such surrender shall be effective as of the delivery to Lessor of the document of surrender executed by Lessee describing this Lease or that portion of the leased lands which is to be surrendered. If there are claimed deficiencies with respect to the land to be surrendered pertaining to public health, safety, conservation of resources and preservation of the environment at the time of delivery of the document, such surrender shall not become fully effective until such time

as such deficiencies have been corrected or determined not to exist. However, provided that if Lessee corrects such deficiencies within sixty (60) days of notification thereof, or if the deficiencies cannot be corrected within sixty (60) days, commences in good faith and thereafter proceeds diligently to correct such deficiencies, then, in such case, although the surrender shall not be fully effective upon delivery of the document of surrender, the Lessee shall be relieved of any other or further obligations and liability as to this Lease or as to that portion of the leased lands which has been submitted for surrender, whether such liabilities or duties arise out of this Lease or the Regulations, including, without limiting the generality of the foregoing, all obligations to pay rent, to commence mining operations or to be diligent in exploration or development of geothermal resources. During the notification and correction periods above described, this Lease shall not be subject to revocation by the Lessor except for a failure by the Lessee after notification to correct such deficiencies within the time period and in the manner hereinabove described or a breach of the terms of this Lease as to any of the remaining leased lands or rights retained by the Lessee; provided, however, that should Lessee contest the validity of any claimed deficiency, the Lessee's obligation to correct shall be suspended pending appeal to and determination by a court of final jurisdiction. Except as aforesaid, nothing herein contained shall constitute a waiver of any liability or duty the Lessee may have with respect to the land or Lease surrendered as a result of any activity conducted on the leased land or under this Lease prior to such surrender. Upon the surrender of this Lease

as to all or any portion of the land covered thereby, or upon any other termination of this Lease except by revocation, the Lessee shall be entitled to all equipment, buildings, and plants placed in and on the leased lands and the Lessor may require the Lessee to remove the same and restore the premises to a similar condition prior to any development or improvements, to the extent reasonably possible. This Lease may also be surrendered if as a result of a final determination by a court of competent jurisdiction, the Lessee is found to have acquired no rights in or to the minerals on reserved lands, nor the right to exploit the same, pursuant to this Lease, and, in such event, the Lessor shall pay over to the person entitled thereto the rentals, royalties and payments paid to the Lessor pursuant to this Lease.

21. ACCEPTANCE OF RENT AND ROYALTIES NOT A WAIVER

The acceptance of rent or royalties by the Lessor shall not be deemed a waiver of any breach by the Lessee of any term, covenant or condition of this Lease, nor of the Lessor's right to give notice of default and to institute proceedings to cancel this Lease in the manner set out in paragraph 19, and the failure of the Lessor to insist upon strict performance of any such term, covenant or condition, or to exercise any option conferred, in any one or more instances, shall not be construed as a waiver or relinquishment of any such term, covenant, condition or option.

22. EXTENSION OF TIME OF PERFORMANCE

That notwithstanding any provision contained herein to the contrary wherever applicable, the Lessor may for good cause, as determined by the Board, allow additional time beyond the time or times specified herein to the Lessee, in which to comply, observe and perform any of the terms, con-

ditions, and covenants contained herein.

23. NO WARRANTY OF TITLE

The Lessor does not warrant title to the leased lands or the geothermal resources and geothermal by-products which may be discovered thereon; this Lease is issued only under such title as the State of Hawaii may have as of the effective date of this Lease or may thereafter acquire. If the interest owned by the State in the leased lands includes less than the entire interest in the geothermal resources and geothermal by-products, for which royalty is payable, as determined by the courts or otherwise, then the bonus, if any, rentals, royalties and other monetary considerations paid or provided for herein shall be paid to the Lessor only in the proportion which its interest bears to said whole for which royalty is payable, and the Lessor shall be liable to such persons for any prior payments made and adjudged by the courts or otherwise; provided, however, that the Lessor shall not be liable for any damages sustained by the Lessee.

This Lease is issued subject to all existing valid rights at the date hereof and such rights shall not be affected by the issuing of this Lease. In the event the leased lands have been sold by the State, subject to mineral reservation, Lessee agrees to follow such conditions and limitations prescribed by law providing for the State, and persons authorized by the State to drill for, produce and take geothermal resources, and occupy and use so much of the surface of the leased lands as may be required for all purposes reasonably connected therewith. Without limiting the effects of the foregoing, where Lessee is not the surface owner, Lessee agrees that before entering, occupying, or

using any of the surface of the leased lands, for any or all purposes authorized by this Lease, Lessee will first secure the written consent or waiver of the owner of the surface of the leased lands or occupier; second, make payment of the damages to crops or other tangible improvements to the owner thereof; or third, in lieu of either of the foregoing provisions, execute a good and sufficient bond or undertaking, payable to and in an amount specified by the Lessor for the use and benefit of the surface owner or occupier of such land, to secure payment of such damages to the crops or tangible improvements of the surface owner or occupier of said land as may be determined and fixed in an action brought upon the bond or undertaking in a court of competent jurisdiction against the principal and sureties thereon, such bond or undertaking to be in the form and in accordance with the rules and regulations. In the event that the State owns only the mineral resources, this Lease is issued subject to any and all right, title and interest of the purchaser, title holder or owner of the surface of the leased lands; and any successor in interest to any such purchaser, title holder or owner of the leased lands, any other provision in this Lease to the contrary notwithstanding.

24. COMMINGLED PRODUCTION - PLANS - APPROVALS - ACCURACY

Subject to testing the absolute open flow potential of wells, whether on the leased lands or other lands, as set forth in paragraph 5D hereof, geothermal resources from any two or more wells, regardless of whether such wells are located on the leased lands, may be commingled when the metering system used to measure geothermal resources has been approved by the Lessor. Prior to the installation of the metering system, Lessee shall submit for approval a schematic

drawing of the proposed system and specifications of the major equipment components. The Lessor will determine if acceptable standards of accuracy for measuring geothermal resources have been obtained, and may approve commingling of geothermal resources. The metering equipment shall be maintained and operated in such a manner as will meet acceptable standards of accuracy. Use of the equipment shall be discontinued at any time upon determination by the State that standards of measurement accuracy or quality are not being maintained, with such commingling stopped until measurement accuracy has been obtained. In the event that the quality and composition of the geothermal resources to be commingled are substantially different, it shall not be approved by the Lessor until acceptable standards and methods of payments are established. If less than the total flow is to be utilized in a plant or facility, then the reduction in flow for each well shall be in the proportion which the total open flow of each contributing well bears to the total open flows of all contributing wells.

25. SUSPENSION OF OPERATIONS

In the event of any disaster or pollution, or likelihood of either, having or capable of having a detrimental effect on public health, safety, welfare, or the environment caused in any manner or resulting from operations under this Lease, the Lessee shall suspend any testing, drilling and production operations, except those which are corrective, or mitigative, and immediately and promptly notify the Chairman. Such drilling and production operations shall not be resumed until adequate corrective measures have been taken and authorization for resumption of operations has been made by the Chairman.

26. DILIGENT OPERATIONS REQUIRED

The Lessee shall be diligent in the exploration and development of the geothermal resources on the leased lands. Failure to perform diligent operations may subject this Lease to revocation by the Board. Diligent operations mean exploratory or development operations on the leased lands including without limitation geothermal surveys, heat flow measurements, core drilling, or the drilling of a well for discovery, evaluation, or production of geothermal resources.

The provisions hereof shall be construed and applied with reference and in relation to geological and engineering determinations and economic and market conditions with respect to geothermal resources in the area or field in which the leased lands is situated. In the event Lessor believes, based on reasonable cause, that Lessee has failed to perform diligently, Lessee may request a hearing and determination, in accordance with paragraph 19 hereof, of the particulars in which Lessee has failed to conduct diligent operations, and if after such hearing Lessee is found not to be diligent in its operations, then if Lessee does not, within ninety (90) days thereafter, commence and in good faith continue remedying such finding of lack of diligence, Lessor may revoke this Lease as herein provided.

27. PRODUCTION OF BY-PRODUCTS

Lessee shall have no obligation to save or process any geothermal by-products unless such saving or processing, independent of revenues or value received from the production of other geothermal resources, including other geothermal by-products, is economically feasible.

28. RECORDS AND REPORTS

(a) Accounting Data. No later than the twenty-fifth (25th) day of every calendar month following the effective date of this Lease, Lessee shall submit a detailed accounting statement for lease operations specifying all charges paid and credits received under this Lease, including but not limited to information showing the amount of gross revenue derived from all geothermal resources produced, shipped, used or sold and the amount of royalty due. The Lessee shall, at the option of the Lessor, provide more detailed statements and explanatory materials to aid the Lessor in interpreting and evaluating Lessee's accounting statement. All such statements are subject to audit and revision by the Lessor and Lessee agrees that the Lessor may inspect all Lessee's books, records and accounts relating to operations under this Lease, including but not limited to the development, production, sale, use or shipment of geothermal resources at all reasonable times. Any statutory or other rights that Lessee may have to object to such inspection by the Lessor are hereby waived.

(b) Exploration Data. Lessee agrees to supply to the Lessor within thirty (30) days of the completion thereof, or the completion of any recorded portion thereof, all physical and factual exploration results, logs, surveys and any other data in any form resulting from operations under this Lease or from any surveys, tests, or experiments conducted on the leased lands by Lessee or any person or entity acting with the consent of Lessee or with information or data provided by Lessee. Lessee agrees to supply to the Lessor within thirty (30) days of the completion thereof, or

the completion of any recorded portion thereof, the results of all geological, geophysical or chemical tests, experiments, reports and studies, including but not limited to reservoir studies and tests, experiments, reports or studies relating to reinjection or reservoir depletion irrespective of whether the result of such tests, experiments, reports or studies contain sensitive or proprietary or confidential information or trade secrets. Lessee further agrees that any statutory or other rights or objections it may have to prevent disclosure of any such tests, experiments, reports or studies referred to in this paragraph by the Lessor are hereby waived. Notwithstanding any provisions hereof, however, all data and documents supplied by Lessee pursuant to this section shall be deemed to have been "obtained in confidence" and may be disclosed to other persons only with the written consent of Lessee or upon a determination by the Lessor that such disclosure is in the public interest or as otherwise provided by law or regulation.

(c) Waiver by Lessee. Lessee hereby waives any and all rights and objections it may have to prevent an examination of the books and records at reasonable times of any individual, association, or corporation which has transported for, or received from Lessee, any geothermal resources produced from the leased lands. Further, Lessee waives any and all rights and objections it may have to prevent an examination and inspection of the books and records, at reasonable times, of any such individual, association or corporation with respect to such individual's, association's, or corporation's, or to Lessee's operations, wells, improvements, machinery and fixtures used on or in connection with

the leased lands.

Lessee does hereby waive any statutory or other right or objection to prevent disclosure to the Lessor or a duly authorized employee or representative of the Lessor of any information, reports, data, or studies of any kind, filed by Lessee with any public agency, federal, state or local, relating to the leased lands, the geothermal resources thereunder, or any operations carried out in connection with this Lease irrespective of whether such information, reports, data, or studies of any kind contain sensitive or proprietary or confidential information or trade secrets. Any and all such information, reports, data, or studies of any kind filed by Lessee with any public agency, federal, state or local, including all information filed with the Lessor pursuant to any paragraph of this Lease, shall be available at all times for the use of the Lessor or its duly authorized representatives for any purpose. Notwithstanding any provisions hereof, however, any information, reports, data or studies obtained by the Lessor from any public agency and which are not public records shall be deemed to have been "obtained in confidence" and may be disclosed to other persons only with the written consent of Lessee or upon a determination by the Lessor that such disclosure is in the public interest.

29. FORCE MAJEURE

If the Lessee is rendered unable to wholly or in part by force majeure to carry out its obligations under this Lease, Lessee shall give to Lessor prompt written notice of the force majeure. Thereupon, any obligations of the Lessee to perform so far as they are affected by the force majeure shall be suspended during the continuance of

the force majeure and the primary term or any continuation period shall be extended for a period equal to the period of suspended performance caused by the force majeure. Lessee shall use all possible diligence to remove or correct the force majeure, but this shall not require the settlement of strikes, lockouts or other labor difficulties. In no event shall any extension affect the sixty-five (65) year maximum term of this Lease.

30. UNIT OR COOPERATIVE PLANS

The Lessee may, with the written consent of the Board, utilize the leased lands or portions thereof under a unit, cooperative or other plan of development or operation with other State, Federal or privately owned lands for the drilling and production of one or more wells in accordance with Rule No. 3.15 of the Regulations.

31. NOTICES

Pursuant to Rule 8.2 of the Regulations, Lessor may give any notice or deliver any document hereunder to Lessee by mailing the same by registered mail addressed to Lessee at BARNWELL GEOTHERMAL CORPORATION, 2828 Paa Street, Suite 2085, Honolulu, Hawaii 96819 or by delivering the same in person to any officer of Lessee. Lessee may give any notice or deliver any document hereunder to Lessor by mailing the same by registered mail addressed to Lessor at DEPARTMENT OF LAND AND NATURAL RESOURCES, P. O. Box 621, Honolulu, Hawaii 96809 or by delivering the same to Lessor in person. For the purposes of this paragraph, either party may change its address by written notice to the other. In case of any notice or document delivered by registered mail, the same shall be deemed delivered when deposited in any United States Post Office,

properly addressed as herein provided, with postage fully prepaid.

32. RESTORATION OF PREMISES

Upon the revocation, surrender or expiration of this Lease, the Lessor or surface owner may require the Lessee to restore the leased lands to their original condition insofar as it is reasonable to do so within ninety (90) days thereof, except for such roads, excavations, alterations or other improvements which may be designated for retention by the surface owner, the Lessor or its agency having jurisdiction over said lands. When determined by the Lessor, surface owner or such State agency, cleared sites and roadways shall be replanted with grass, shrubs, or trees by the Lessee.

33. HEADINGS

The paragraph headings throughout this Lease are for the convenience of the Lessor and the Lessee and are not intended to construe the intent or meaning of any of the provisions thereof.

34. REFERENCE

Unless specifically indicated otherwise, the regulations referred to in and governing this Lease shall be Regulation No. 8 relating to Regulations on Leasing of Geothermal Resources and Drilling for Geothermal Resources in Hawaii approved and adopted by the Board on March 10, 1978, and all terms used herein shall be given the meaning as set out in Rule 1.5 of said Regulation 8.

35. INSOLVENCY

In the event the Lessee at any time during the term hereof is insolvent under any of the provisions of the Federal Bankruptcy Act, or makes a voluntary assignment of his assets for the benefit of creditors, or is adjudged a

bankrupt, either upon Lessee's voluntary petition in bankruptcy, or upon the involuntary petition of Lessee's creditors, or any of them, or should an attachment be levied and permitted to remain for any unreasonable length of time upon or against the interest, rights or privileges of Lessee in or to any geothermal resources produced from the wells drilled by Lessee upon the leased lands, then, upon election by the Lessor, all of the interests, rights, and privileges of Lessee in and to all geothermal resources produced and saved from the leased lands by reason of Lessee's operations thereon, shall terminate upon receipt of written notice from the Lessor advising that the State has so elected. In such event the Lessor shall have, and Lessee, by the acceptance hereof, hereby gives the Lessor the right, option and privilege to cancel and terminate this Lease and all of the terms and provisions granted hereby, and all of the rights and privileges of Lessee in and to or upon the leased lands and in and to any geothermal resources produced and saved from the leased lands by reason of Lessee's operations thereon, and all of Lessee's rights and privileges granted by this Lease shall terminate immediately upon receipt of written notice from the Lessor that the Lessor has so exercised its option.

36. SUBSIDENCE. Any subsidence to the leased or adjacent lands shall be considered pursuant to 7.7 of Regulation 8.

37. WORKMEN'S COMPENSATION INSURANCE

Lessee shall at all times in any and all operations under this Lease and in any and all work in and upon the leased lands carry full and complete Workmen's Compensation Insurance covering all employees.

38. SUCCESSORS

The term "Lessor" herein shall mean and include

Lessor, its legal successors and assigns, and the term "Lessee" herein or any pronoun used in place thereof shall mean and include the masculine or feminine, the singular or plural number, and jointly and severally individuals, firms or corporations, and their and each of their respective heirs, successors, personal representatives and permitted assigns, according to the context hereof.

39. SEVERABILITY

If any provision herein is judicially determined, to be invalid, it shall be considered deleted herefrom and shall not invalidate the remaining provisions.

40. GEOTHERMAL OWNERSHIP

If the Lessee hereunder is the surface landowner it is mutually agreed that issuance of this Lease by the Lessor and acceptance thereof by the Lessee shall not be deemed or construed to be a waiver of, and shall be without prejudice to, any claim of ownership to the geothermal resources by the Lessee and Lessor incidental thereto.

41. LEASE TERMS VS. REGULATION 8

Unless indicated otherwise herein, Regulation 8 shall supersede any of the lease provisions herein which conflicts with said Regulation.

42. APPLICABILITY OF LEASE

This lease is being issued to the Lessee as assignee and holder of the occupier's rights to a mining lease and shall not be applicable to those parcels of lands where the Lessee has not acquired such rights.

IN WITNESS WHEREOF, the parties hereto have caused these presents to be executed this 10th day of August, 1981.

STATE OF HAWAII

By _____
Chairman and Member
Board of Land and
Natural Resources

APPROVED BY THE BOARD OF LAND AND NATURAL RESOURCES AT ITS MEETING HELD ON

February 13, 1981

By _____
Member
Board of Land and
Natural Resources

LESSOR

BARNWELL GEOTHERMAL CORPORATION

By _____
Its Attorney-in-Fact

By _____
Its Pres.

By _____
Its

LESSEE

APPROVED AS TO FORM:

_____
Deputy Attorney General
Dated: 6/10/81

STATE OF HAWAII)
) SS
COUNTY OF)

On this _____ day of _____, 19___, before me personally appeared _____ and _____ to me known to be the person(s) described in and who executed the foregoing instrument and acknowledged that _____ executed the same as _____ free act and deed.

_____
Notary Public, State of Hawaii
My commission expires: _____

STATE OF HAWAII)
) SS
City and
COUNTY OF Honolulu)

On this 24th day of July, 1981, before me appeared Morton H. Kinzler and Ed Craddick, to me personally known, who, being by me duly sworn, did say that they are the Chief Executive Officer & Chairman of the Board and President, respectively, of Barnwell Geothermal Corporation, and that the seal affixed to the foregoing instrument is the corporate seal of said corporation, and that said instrument was signed and sealed on behalf of said corporation by authority of its Board of Directors, and the said Morton H. Kinzler and Ed Craddick acknowledged that they executed said instrument as the free act and deed of said corporation.

Faith K Tankawa
Notary Public, State of Hawaii
My commission expires: 7-18-83

EXHIBIT A

Lands situate at Kapoho, Kaniahiku, Keahialaka and Pohoiki, Puna, Hawaii, being all of those certain parcels of land (portions of the land described in and covered by:

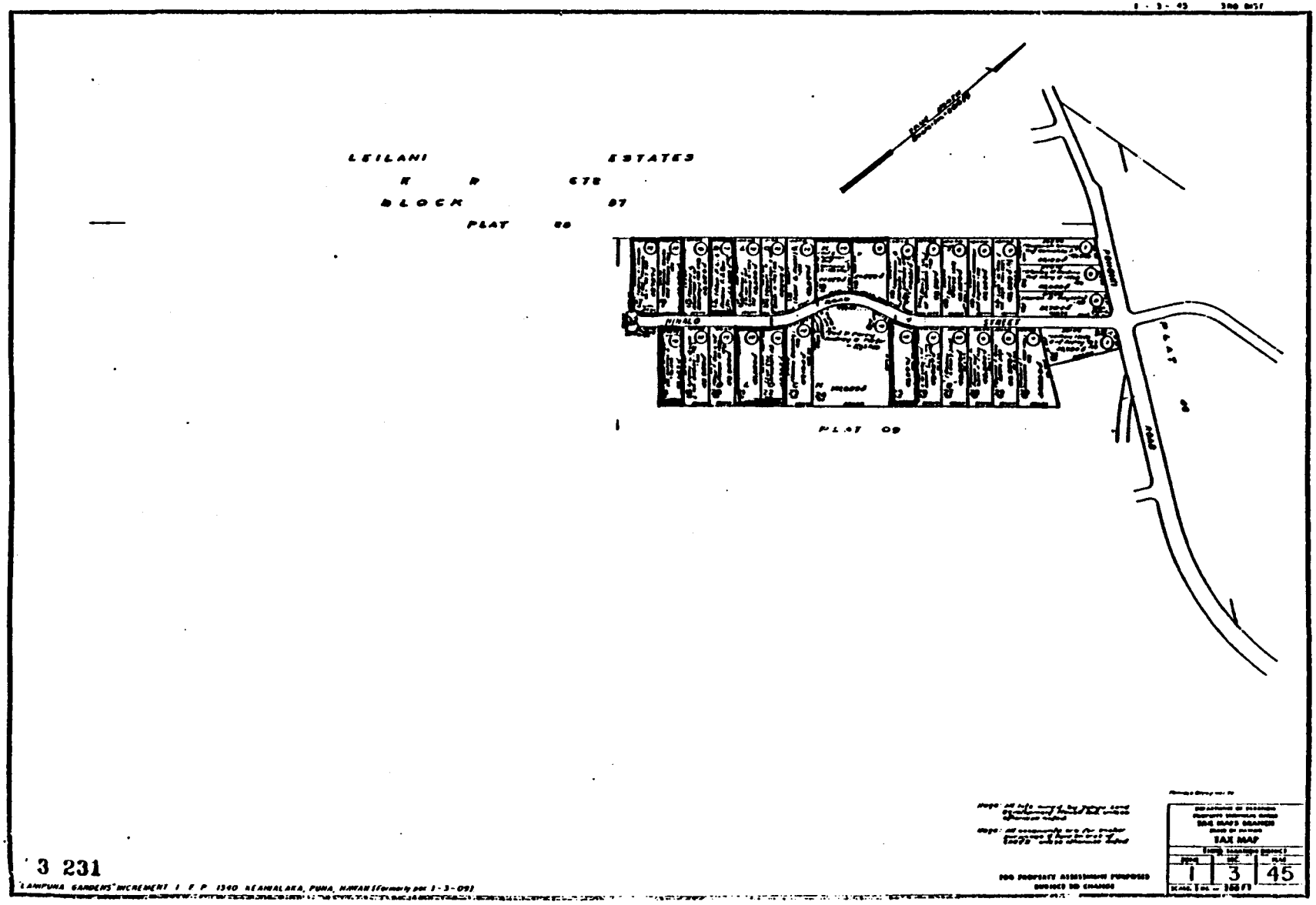
1. Royal Patent 4497, Land Commission Award No. 8559, Apana 5, to C. Kanaina;

2. Royal Patent Grant No. 3209 to Robert Rycroft; and

3. Land Patent No. 8094, Land Commission Award No. 8559-B, Apana 15, to Wm. C. Lunalilo designated by Tax Map Key as follows:

TAX MAP KEY	TAX MAP KEY	AREA
1-3-45:9	1-3-46:60	
1-3-45:10	1-3-46:61	
1-3-45:14	1-3-46:62	
1-3-45:16	1-3-46:63	
1-3-45:17	1-3-46:64	
	1-3-46:65	
1-3-45:25	1-3-46:66	
1-3-45:22	1-3-46:67	
1-3-45:21	1-3-46:68	
1-3-45:18	1-3-46:69	
	1-3-46:70	
1-3-46:2	1-3-46:71	
1-3-46:3	1-3-46:72	
1-3-46:4	1-3-46:73	
1-3-46:5	1-3-46:74	
1-3-46:13	1-3-46:29	
1-3-46:14	1-3-46:30	
1-3-46:15	1-3-46:33	
1-3-46:16	1-3-46:34	
1-3-46:17	1-3-46:35	
1-3-46:18	1-3-46:36	
1-3-46:19	1-3-46:37	
1-3-46:20	1-3-46:38	
1-3-46:21	1-3-46:39	
1-3-46:22	1-3-46:40	
1-3-46:23	1-3-46:41	
1-3-46:24	1-3-46:42	
1-3-46:25	1-3-46:43	
	1-3-46:44	
1-3-46:76	1-3-46:45	
1-3-46:78	1-3-46:46	
1-3-46:79	1-3-46:47	
1-3-46:81	1-3-46:48	
1-3-46:82		
1-3-46:84	1-3-46:49	
1-3-46:52	1-3-46:50 (Subtotal of	
1-3-46:53	1-3-46:51 foregoing)	77.0000 acres
1-3-46:54		
1-3-46:55	1-3-08:06	140.0000 acres
1-3-46:56		
1-3-46:57	1-3-08:07	160.2920 acres
1-3-46:58		
1-3-46:59	1-3-08:19	227.5910 acres
	1-3-09:07	119.1800 acres
	1-4-01:20 (portion)	45.0738 acres
	TOTAL	769.1368 acres

EXHIBIT "B-11"



3 231

"LANIPUNA GARDENS" INCREMENT I F P 1340 KEAHALAKA, PUNA, HAWAII (Formerly por 1-3-09)

EXHIBIT "B-2"

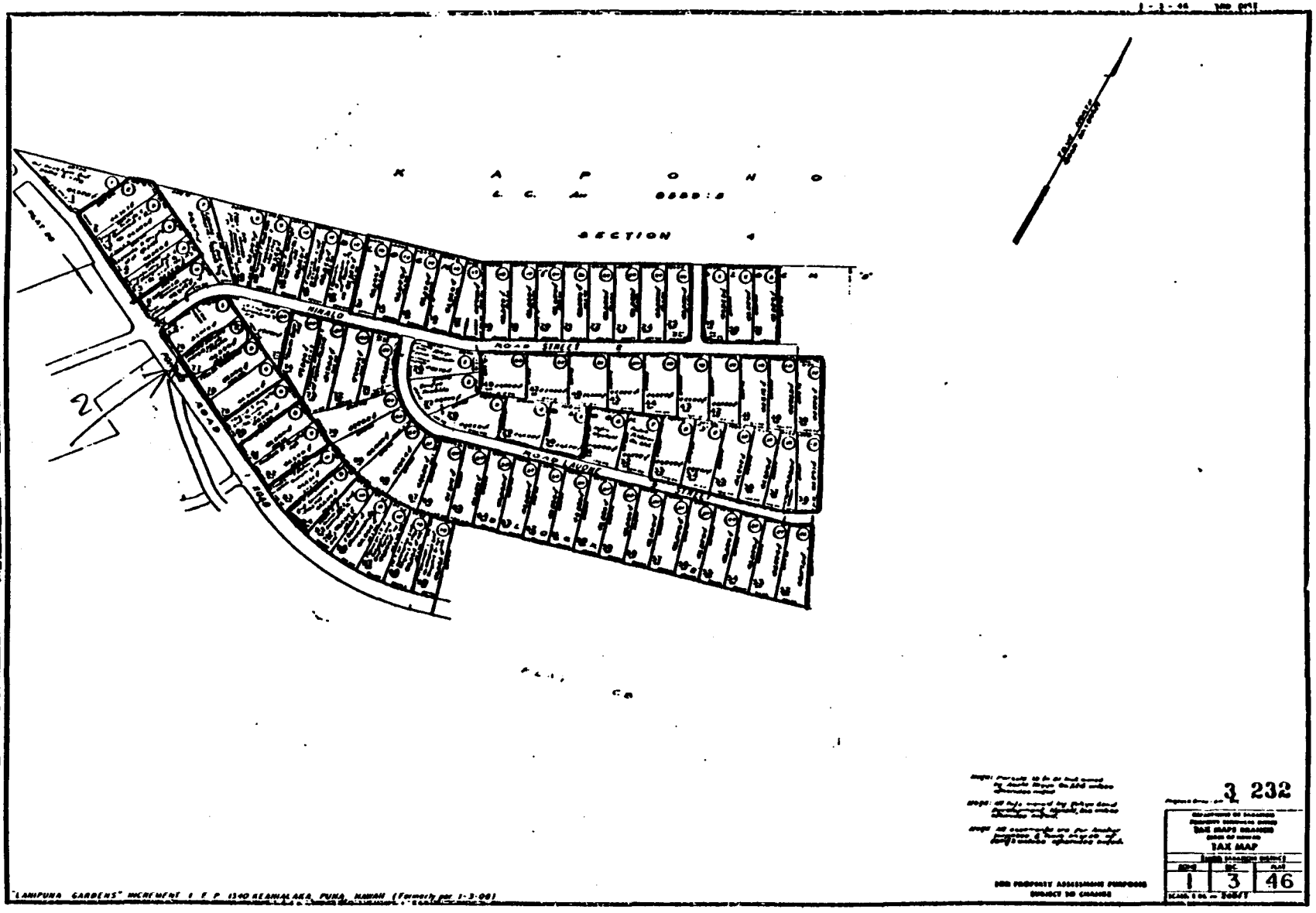

SECTION
HINALO
ROAD
ROAD
ROAD
2
3 232
TAX MAP
ZONE 1
SEC 3
PARCEL 46
"LANIPUNA GARDENS" INCREMENT I F P 1590 KEAHALAKA PUNA, HAWAII (Formerly por 1-3-06)

EXHIBIT "B-3"

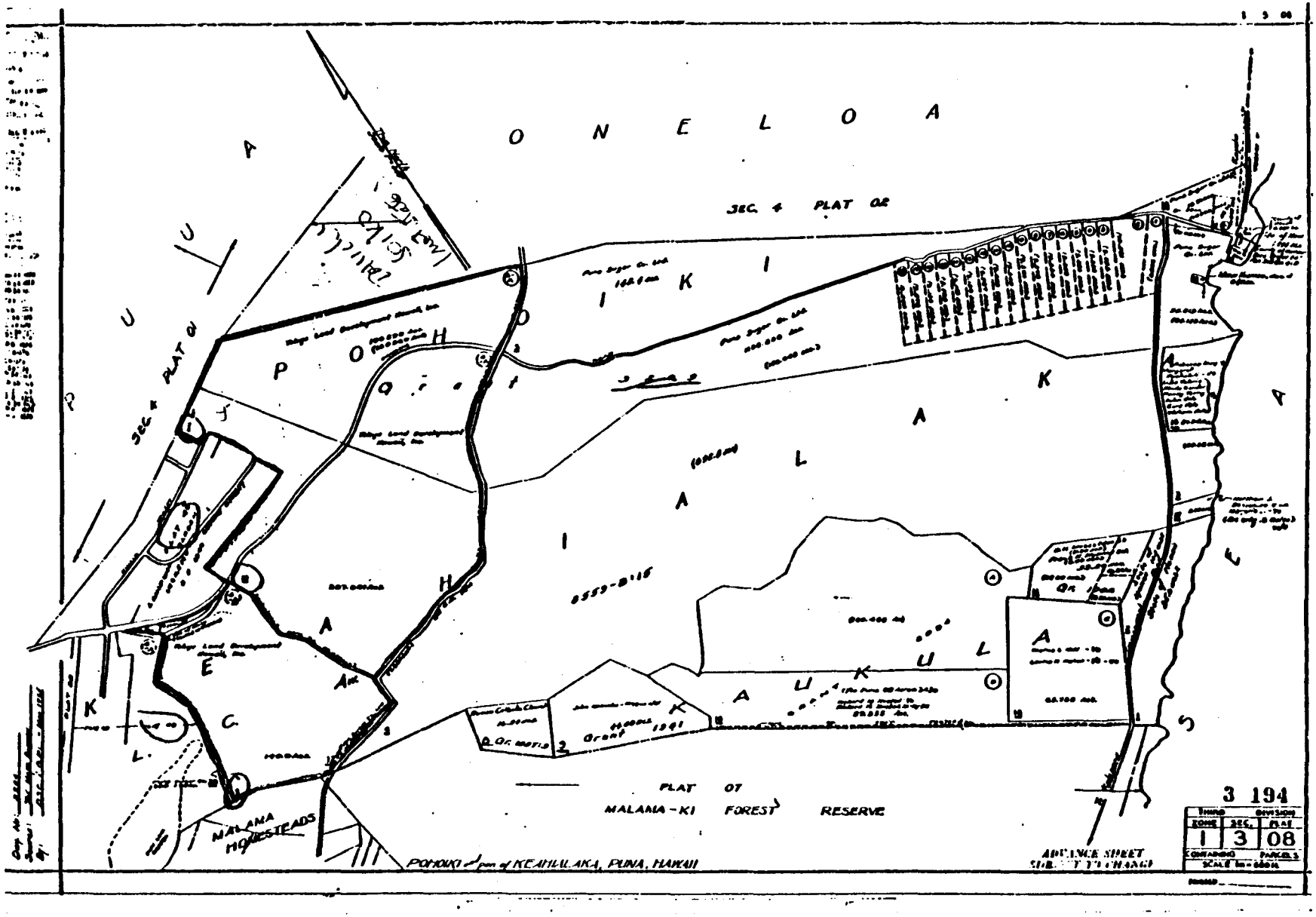

O N E L O A
SEC. 4 PLAT 02
P O H O I K I
K A L A I
K A U L A U
PLAT OF
MALAMA-KI FOREST RESERVE
MALAMA HOMESTEADS
POHOKI 1 por of KEAHILUAKA, PUNA, HAWAII
3 194
ZONE 1
SEC. 3
DIV. 08

EXHIBIT "B-4"

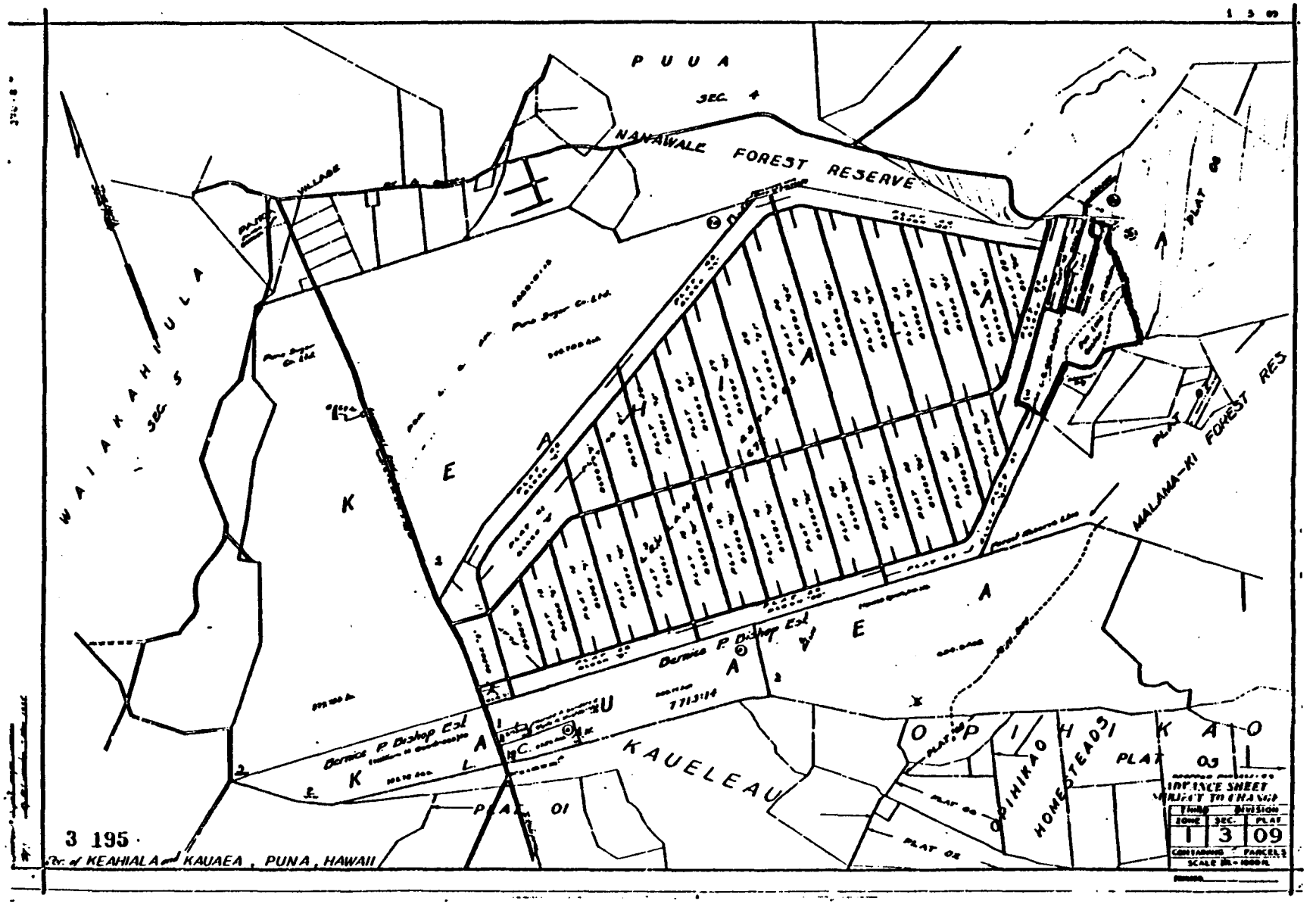

PUUA
SEC. 4
NANAWALE FOREST RESERVE
WAIAKAHIULA
SEC. 5
MALAMA-KI FOREST RES
KEAAU
KAUELEAU
Bernice P. Bishop Est
Bernice P. Bishop Est
PLAT 01
PLAT 02
PLAT 03
OPIHIKAO HOMESTEADS
3 195
Dr. of KEAHIALA and KAUAEA, PUNA, HAWAII
INDEX SHEET
SUBJECT TO CHANGE
TMK DIVISION
ZONE 1
SEC. 3
PLAT 09

EXHIBIT "B-5"

SCHEDULE A

TAX MAP KEY

1-4-90:1
1-4-90:2
1-4-90:3
1-4-90:4
1-4-90:5
1-4-90:6
1-4-90:7
1-4-90:8
1-4-90:9
1-4-90:10
1-4-90:11
1-4-90:12
1-4-90:13
1-4-90:15
1-4-90:16
1-4-90:17
1-4-90:18
1-4-90:19
1-4-90:20
1-4-90:21
1-4-90:22
1-4-90:23
1-4-90:24
1-4-90:25
1-4-90:26
1-4-90:27
1-4-90:28

Any lands included under the current Tax Map Keys not included in the lands listed in the State Geothermal Lease are not held by Barnwell Geothermal Corporation and will not be transfered under the Sub-lease.

SCHEDULE B

TAX MAP KEY AS LISTED IN STATE MINERAL LEASE	AREA (ACRES)	CURRENT TAX MAP KEY	AREA (ACRES)
1-3-45:9	1.046	1-3-45:9	1.046
1-3-45:10	1.019	1-3-45:10	1.019
1-3-45:14	1.000	1-3-45:14	1.000
1-3-45:16	1.000	1-3-45:16	1.000
1-3-45:17	1.005	1-3-45:17	1.005
1-3-45:25	1.054	1-3-45:25	1.054
1-3-45:22	1.004	1-3-45:22	1.004
1-3-45:21	1.000	1-3-45:21	1.000
1-3-45:18	1.000	1-3-45:18	1.000
1-3-08:06	140.000	1-3-08:6	129.767
		1-3-08:7	8.500
		State Road	1.736
1-3-09:07	119.180	1-3-45:38	18.546
		1-3-45:37	18.423
		1-3-45:36	30.060
		1-3-45:35	20.551
		1-3-45:34	20.230
		1-3-45:33	14.700
1-4-01:20 (portion)	45.073	1-4-90:1	1.000
		1-4-90:2	1.048
		1-4-90:3	1.170
		1-4-90:4	1.291
		1-4-90:5	1.413
		1-4-90:6	1.042
		1-4-90:7	1.097
		1-4-90:8	1.332
		1-4-90:9	1.053
		1-4-90:10	1.044
		1-4-90:11	1.136
		1-4-90:12	1.164
		1-4-90:13	1.044
		1-4-90:15	18.453
		1-4-90:16	0.031

SCHEDULE B

TAX MAP KEY AS LISTED IN STATE MINERAL LEASE	AREA (ACRES)	CURRENT TAX MAP KEY	AREA (ACRES)
1-4-01:20 (portion) Continued		1-4-90:17	0.031
		1-4-90:18	1.130
		1-4-90:19	1.098
		1-4-90:20	1.162
		1-4-90:21	1.139
		1-4-90:22	1.152
		1-4-90:23	1.155
		1-4-90:24	1.092
		1-4-90:25	1.341
		1-4-90:26	1.308
		1-4-90:27	0.351
		1-4-90:28	0.293
TOTAL	313.381		316.211

The acreage is approximate.

Any lands included under the current Tax Map Keys not included in the lands listed in the State Geothermal Lease are not held by Barnwell Geothermal Corporation and will not be transfered under the Sub-lease.

SCHEDULE C

TAX MAP KEY

1-4-90:18
1-4-90:19
1-4-90:20
1-4-90:21
1-4-90:22
1-4-90:23
1-4-90:24
1-4-90:25
1-4-90:26

Any lands included under the current Tax Map Keys not included in the lands listed in the State Geothermal Lease are not held by Barnwell Geothermal Corporation and will not be transfered under the Sub-lease.

SCHEDULE D

TAX MAP KEY AS LISTED IN STATE MINERAL LEASE	AREA (ACRES)	CURRENT TAX MAP KEY	AREA (ACRES)
1-3-46:2	1.027	1-3-46:2	1.027
1-3-46:3	1.000	1-3-46:3	1.000
1-3-46:4	1.000	1-3-46:4	1.000
1-3-46:5	1.000	1-3-46:5	1.000
1-3-46:13	1.000	1-3-46:13	1.000
1-3-46:14	1.000	1-3-46:14	1.000
1-3-46:15	1.000	1-3-46:15	1.000
1-3-46:16	1.000	1-3-46:16	1.000
1-3-46:17	1.028	1-3-46:17	1.028
1-3-46:18	1.000	1-3-46:18	1.000
1-3-46:19	1.000	1-3-46:19	1.000
1-3-46:20	1.000	1-3-46:20	1.000
1-3-46:21	1.000	1-3-46:21	1.000
1-3-46:22	1.000	1-3-46:22	1.000
1-3-46:23	1.000	1-3-46:23	1.000
1-3-46:24	1.000	1-3-46:24	1.000
1-3-46:25	1.000	1-3-46:25	1.000
1-3-46:76	1.309	1-3-46:76	1.309
1-3-46:78	1.000	1-3-46:78	1.000
1-3-46:79	1.000	1-3-46:79	1.000
1-3-46:81	1.000	1-3-46:81	1.000
1-3-46:82	1.000	1-3-46:82	1.000
1-3-46:84	1.001	1-3-46:84	1.001
1-3-46:52	6.000 *	1-3-46:52	6.000
1-3-46:53	1.024	1-3-46:53	1.024
1-3-46:54	1.000	1-3-46:54	1.000
1-3-46:55	1.000	1-3-46:55	1.000
1-3-46:56	1.000	1-3-46:56	1.000
1-3-46:57	1.000	1-3-46:57	1.000
1-3-46:58	1.000	1-3-46:58	1.000
1-3-46:59	1.000	1-3-46:59	1.000
1-3-46:60	1.000	1-3-46:60	1.000
1-3-46:61	1.000	1-3-46:61	1.000
1-3-46:62	1.000	1-3-46:62	1.000
1-3-46:63	1.000	1-3-46:63	1.000
1-3-46:64	1.000	1-3-46:64	1.000
1-3-46:65	1.000	1-3-46:65	1.000
1-3-46:66	1.031	1-3-46:66	1.031
1-3-46:67	1.049	1-3-46:67	1.049
1-3-46:68	1.080	1-3-46:68	1.080
1-3-46:69	1.135	1-3-46:69	1.135
1-3-46:70	1.085	1-3-46:70	1.085
1-3-46:71	1.064	1-3-46:71	1.064
1-3-46:72	1.090	1-3-46:72	1.090
1-3-46:73	1.193	1-3-46:73	1.193
1-3-46:74	1.087	1-3-46:74	1.087
1-3-46:29	1.025	1-3-46:29	1.025
1-3-46:30	1.025	1-3-46:30	1.025
1-3-46:33	1.025	1-3-46:33	1.025
1-3-46:34	1.025	1-3-46:34	1.025
1-3-46:35	1.025	1-3-46:35	1.025

SCHEDULE D

TAX MAP KEY AS LISTED IN STATE MINERAL LEASE	AREA (ACRES)	CURRENT TAX MAP KEY	AREA (ACRES)
1-3-46:36	1.026	1-3-46:36	1.026
1-3-46:37	1.026	1-3-46:37	1.026
1-3-46:38	1.026	1-3-46:38	1.026
1-3-46:39	1.024	1-3-46:39	1.024
1-3-46:40	1.025	1-3-46:40	1.025
1-3-46:41	1.024	1-3-46:41	1.024
1-3-46:42	1.025	1-3-46:42	1.025
1-3-46:43	1.025	1-3-46:43	1.025
1-3-46:44	1.026	1-3-46:44	1.026
1-3-46:45	1.024	1-3-46:45	1.024
1-3-46:46	1.025	1-3-46:46	1.025
1-3-46:47	1.024	1-3-46:47	1.024
1-3-46:48	1.025	1-3-46:48	1.025
1-3-46:49	1.000	1-3-46:49	1.000
1-3-46:50	1.000	1-3-46:50	1.000
1-3-46:51	1.000	1-3-46:51	1.000
1-3-08:07	160.292	1-3-08:23 **	30.725
		1-3-08:22	13.095
		1-3-08:24	39.299
		1-3-08:25	29.149
		1-3-08:26	21.440
		1-3-08:27	21.875
1-3-08:19	227.591	1-3-08:19	5.001
		1-3-08:37	5.001
		1-3-08:38	5.001
		1-3-08:39	5.001
		1-3-08:40	10.994
		1-3-08:28	42.730
		1-3-08:29	49.195
		1-3-08:30	43.823
		1-3-08:31	32.613
		1-3-08:32	32.005
TOTAL	460.656		459.573

* Part of this acreage was in 1-3-08:7
** 1-3-08:23 was subsequently broken down as follows:

1-3-46:91	3.375
1-3-46:92	3.685
1-3-46:93	3.172
1-3-46:94	3.124
1-3-46:95	3.019
1-3-46:96	3.601
1-3-46:97	4.090
1-3-46:98	3.060
1-3-46:99	3.599

The acreage is approximate.

Any lands included under the current Tax Map Keys not included in the lands listed in the State Geothermal Lease are not held by Barnwell Geothermal Corporation and will not be transfered under the Sub-lease.

MH
CLC.

EXHIBIT "B"

SUBLEASE
OF
STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
GEOTHERMAL RESOURCES MINING LEASE NO. R-3

THIS SUBLEASE is made as of and effective this _____ day of _____, 19___, by and between BARNWELL GEOTHERMAL CORPORATION, a Delaware corporation, whose business and post office address is 2828 Paa Street, Suite 2085, Honolulu, Hawaii 96819 ("Sublessor"), and MORGAN OIL, LTD., a Kentucky corporation whose business and post office address is Route 6, Box 8, Manchester, Kentucky 40962 ("Sublessee").

W I T N E S S E T H:

WHEREAS, by that certain State of Hawaii Department of Land and Natural Resources Geothermal Resources Mining Lease No. R-3 dated August 10, 1981 by and between Sublessor and the State of Hawaii (the "State") (the "Master Lease") Sublessor holds the sole and exclusive right to drill for, produce and develop geothermal resources and geothermal by-products in and under those certain parcels of land identified in Exhibit "A" attached to the Master Lease containing approximately 769.13 acres situated at Puna, Hawaii as shown on the maps marked Exhibits "B-1", "B-2", "B-3", "B-4" and "B-5" to said Master Lease (the "Subleased Lands");

WHEREAS, Sublessor and Sublessee are parties to that certain Geothermal Development Agreement dated as of March 18, 1991 (the "Development Agreement") pursuant to which (1) Sublessee has agreed to develop the geothermal resources under certain portions of the Subleased Lands in consideration of the royalties to be paid Sublessor pursuant to this Sublease and (2) the parties contemplate the construction of an electrical generation facility if Sublessee successfully develops geothermal resources from the premises demised hereunder; and

WHEREAS in furtherance of the transactions described in the Development Agreement Sublessor desires to sublease its interests demised by the Master Lease to Sublessee on the terms and conditions contained herein as to certain portions of the Subleased Lands, more specifically those portions comprising the Tax Map Key Nos. listed on Schedule A attached hereto and incorporated herein by reference.

NOW THEREFORE, in consideration of the mutual covenants and conditions contained herein, Sublessor and Sublessee do hereby agree as follows:

Section 1. Sublease

Sublessor, in consideration of the royalties, rental, and other monetary consideration, agreements and stipulations contained herein and subject to the observance by Sublessor of all terms, conditions and covenants contained in the Master Lease, does hereby sublease, unto Sublessee its rights under the Master Lease to drill for, produce and take geothermal resources and geothermal by-products from those portions of the mineral interests demised by the Master lease as more particularly described in Schedule "A" attached hereto and incorporated by this reference (the "Subleased Lands"), and occupy and use so much of the surface of these Subleased Lands as may be reasonably required pursuant to the provisions of Chapter 182 of the Hawaii Revised Statutes and the regulations relating to the Subleased Lands, Title 13, Subtitle 7, Chapter 183, Administrative Rules on Leasing and Drilling of Geothermal Resources (the "Regulations").

Sublessee takes this Sublease subject to all of the terms and conditions of the Master Lease and shall observe and perform all covenants, duties and agreements to be observed and performed by Sublessor under the Master Lease including complying with all performance time deadlines set forth in the Master Lease applicable to Sublessor so as to prevent the early termination of the Master Lease including but not limited to, the covenant of Sublessor, to be observed and performed by Sublessee, not to stop drilling operations, once commenced, for a period of more than 180 days. Sublessee agrees to comply with these provisions and to save and hold the State, Sublessor and Sublessor's officers, directors, agents and authorized representatives, harmless with respect to the claims made under said statutes and Regulations by the owners and occupiers of the surface of the Subleased Lands or other

losses, damages, claims or other amounts arising out of or relating to the actions taken by Sublessee contemplated hereunder.

Section 2. Reservation To Sublessor

All rights in the interest demised hereunder not granted to Sublessee by Sublessor are hereby reserved to Sublessor. Without limiting the generality of the foregoing, such reserved rights include:

A. Disposal. If Sublessor or the State owns the surface of the Subleased Lands or any portion thereof, the right to sell or otherwise dispose of such interest in the Subleased Lands owned by Sublessor or the State.

B. Rights-of-Way. Such rights-of-way, easements, or access upon the Subleased Lands as may be reasonably necessary for Sublessor or the State to make use of the portions of the Subleased Lands owned by Sublessor or the State; provided however, that such easements and rights-of-way do not interfere with or endanger present operations or reasonable prospective operations or facilities contemplated by this Sublease and the Development Agreement.

C. Casing. As to those portions of the Subleased Lands owned by Sublessor or the State, the right to acquire any wells and casing if Sublessee drills and finds only potable water and such if water is not required by Sublessee in its geothermal development activities contemplated by this Sublease and the Development Agreement.

Section 3. Term

Except as otherwise provided herein the term of this Sublease shall be for a period coinciding with the Master Lease, including any extensions thereof obtained by Sublessee pursuant to the extension provisions of the Master Lease. In the event of the occurrence of an Event of Default under the Development Agreement, this Sublease shall terminate automatically and further, in the event of a termination of the Development Agreement for any reason whatsoever, then this Sublease shall likewise terminate automatically.

Section 4. Rentals, Royalties And Taxes

A. Annual Rental if No Production

So long as Sublessee is not producing hot water or steam in commercial quantities (as such terms are defined in the Development Agreement) pursuant to the geothermal development activities to be undertaken pursuant to the Development Agreement, Sublessee shall pay Sublessor an annual rental of ONE AND NO/100 DOLLARS ($1.00) per acre or fraction thereof, on the Subleased Lands payable in advance commencing on the Effective Date, which annual rental, for any one year, will be subject to rebate in a pro-rata fashion upon the commencement of payment of the royalties described in Section 4.B hereof.

B. Overriding Royalties of Fifteen Percent of Production

In lieu of the monthly rental described above, if and when the Sublessee shall be producing steam and/or hot water in commercial quantities pursuant to its obligations and agreements contained in the Development Agreement, Sublessee shall pay to Sublessor the following royalties on geothermal production measured and computed in accordance with the Regulations:

1. Geothermal Resources (Excluding Geothermal By-Products)

(a) A royalty of fifteen (15%) percent of the gross proceeds received by the Sublessee from the sale or use of geothermal resources (as defined in H.R.S. § 182-1), and consisting of steam and/or hot water as contemplated by the Development Agreement, produced from the Subleased Lands and measured at the wellhead without any deduction for treating, processing and transportation cost, notwithstanding the Regulations plus

(b) the royalty payable by Sublessor to the State under the Master Lease in accordance with Paragraph 5 thereof (currently 10% of gross proceeds).

2. Geothermal By-Products

(a) A royalty of fifteen (15%) percent of the gross proceeds received by the Sublessee from the sale of any geothermal by-product produced

under this Sublease, including demineralized or desalted water, after deducting the treating, processing and transportation costs incurred plus

(b) the royalty payable by Sublessor to the State under the Master Lease in accordance with Paragraph 5 thereof (currently 5% of gross proceeds).

In the event that geothermal resources or geothermal by-products produced under the Development Agreement from the interests demised hereunder are not sold to a third party but are used or furnished to a plant owned or controlled by Sublessor or Sublessee, the gross proceeds of such production for the purposes of computing the royalties payable hereunder shall be that which is reasonably equal to the gross proceeds being paid to other geothermal producers for geothermal resources or geothermal by-products of like quality under similar conditions without deducting any treating, processing and transportation costs incurred.

No payment of royalty will be required on water if it is used in plant operation for cooling or generation of electric energy or is reinjected into the sub-surface. No royalty shall be paid for geothermal by-products used or consumed by Sublessee in his production operations.

Gross proceeds shall not be deemed to include excise, production, severance or sales taxes or other taxes imposed on Sublessor or Sublessee by reason of the production, severance or sale of geothermal resources or geothermal by-products.

C. General Excise Tax

Sublessee shall pay to Sublessor, as additional rent, at the time and together with each payment of rent or royalty hereunder or any other charge hereunder which is subject to the Hawaii general excise tax or any successor or similar tax, all such general excise tax payable to Sublessor.

D. Deadline for Royalty Payments

Sublessee shall make payments of royalties to Sublessor within twenty-five (25) days after the end of each calendar month following the production upon which

such royalty is due and accompany such payment with a certified true and correct written statement by Sublessee, showing the amount of geothermal resources and geothermal by-products produced, sold, used and/or otherwise disposed of and the basis for computation and determination of royalties thereon. Sublessee shall furnish such other data as may be requested by Sublessor or the State to audit and verify all royalties due and payable to Sublessor or assist Sublessor in the determination of the royalties payable to the State by Sublessor. A copy of such data and certified statement by Sublessee shall also be concurrently transmitted to the State of Hawaii, Board of Land and Natural Resources (the "Board").

E. Royalties-Production (absolute open flow potential)

If Sublessee or any entity of which Sublessee is the Managing General Partner, such as the Drilling Partnership(s) contemplated by the Development Agreement supply steam to any electrical generating facility from wells on both the Subleased Lands and other lands and there is producible from all such wells in the aggregate, a quantity of steam greater than the maximum quantity utilizable by said electrical generating facility, Sublessee agrees and shall cause such Drilling Partnership(s) to produce and sell or use steam from the Subleased Lands in a proportion no less than the proportion that the absolute open flow potential (the absolute open flow potential as used herein is the rate of flow in pounds of steam per hour that would be produced by a well if the only pressure against the face of the producing formation in the well bore were atmospheric pressure) of the wells on the Subleased Lands, or wells developed in the Area of Mutual Interest pursuant to the Development Agreement bears to the total absolute open flow potential of all such wells from which Sublessee (or its Drilling Partnership(s) supplies steam to such electrical generating facility. For purposes of this section it shall be deemed that Sublessee (or its Drilling Partnership(s) supplies steam from a well to an electrical generating facility when such well is capable of producing geothermal resources in commercial quantities to such facility. The absolute open flow potential of all such wells whether on the Subleased Lands or other lands shall be determined by the State and Sublessor and shall be based upon tests performed by Sublessee as prescribed by the State. Notwithstanding any provisions on well testing that may be contained in the Development Agreement, in this regard, Sublessee shall, upon completion of each of such wells, and prior to the

placing of such wells on commercial production, perform, and deliver to the State the results of, the following tests:

1. Pressure Test - Pressure-buildup tests to determine static reservoir pressure and well bore conditions. If pressure-buildup tests are based on shut-in wellhead data, then static well bore temperature surveys must also be conducted:

2. Isochronal Flow Tests - Isochronal flow tests or two rate flow tests to establish a back pressure curve and the absolute open flow potential;

3. Other Tests-Static Reservoir Pressure - Other tests as deemed to be necessary by the State.

After commencement of commercial production from each of such wells, Sublessee shall annually, or more frequently if requested by Sublessor or the State determine static reservoir pressure and complete any other tests as specified by the Sublessor or the State.

F. Geothermal By-Products Testing

Sublessee shall furnish Sublessor and the Chairman of the State of Hawaii, Board of Land and Natural Resources (the "Chairman") the results of periodic tests showing the content of geothermal by-products in the produced geothermal resources. Such tests shall be taken as specified by the Chairman and by the method(s) of testing approved by them.

G. Interest and Penalties

1. Interest - It is agreed by the parties hereto that any royalties, rentals, or other monetary consideration arising under the provisions of this Sublease and not paid when due as provided in this Sublease, shall bear interest from the day on which such royalties, rentals, or other monetary consideration were due at the rate of 12% per annum or such higher rates as may be permitted by law until such royalties, rentals, or other monetary consideration shall be paid to Sublessor.

2. Penalty - It is agreed by the parties hereto that any royalties, rentals or other monetary consideration arising under the provisions of this Sublease and not paid when due as provided in this Sublease, shall be subject to a five (5%) percent penalty on the amount of any

such royalties, rentals, percentage of net profits, or other monetary consideration arising under the provisions of this Sublease, in addition to any interest due thereon.

3. Definition of Royalties, etc. - It is agreed by the parties hereto that, for the purpose of this section, "royalties, rentals or other monetary consideration arising under the provisions of this Sublease and not paid when due" includes but is not limited to any amounts determined by Sublessor to have been due to Sublessor if, in the judgment of the Sublessor, an audit by Sublessor of the accounting statement required by this sublease shows that inaccurate, unreasonable or inapplicable information contained or utilized in the statement resulted in the computation and payment to Sublessor of less royalties, rentals, or other monetary consideration than actually were due Sublessor hereunder.

4. Reimbursement of Sublessor - Sublessee shall reimburse Sublessor any amounts paid by Sublessor to the State in the nature of penalties, fees, charges or interest payable to the State as a result of the breach by Sublessee of any provisions of this Sublease.

Section 5. Real Property Taxes

Sublessee shall pay any real property taxes payable under the Master Lease with respect to the Subleased Lands. Sublessee shall also pay any real property taxes payable under the Master Lease with respect to structures and improvements placed on the Subleased Lands.

Section 6. Breach or Default; Revocation.

Time is of the essence of this Sublease and if Sublessee shall fail to pay such rent, royalties or other charges due hereunder in the manner herein provided, or shall become bankrupt, or shall abandon the interest demised hereunder, or if this Sublease and the interest demised hereunder shall be attached or otherwise taken by operation of law, or if any assignment be made of Sublessee's property for the benefit of creditors, or if Sublessee shall fail to observe and perform any of the covenants, terms and conditions herein contained and on Sublessee's part to be observed and performed, and such failure shall continue for a period of more than [fifteen (15)] days after delivery by Sublessor of a written notice of such breach or default to Sublessee, or upon the occurrence of any Event of Default under the Development Agreement, Sublessor may at its sole discretion, terminate

this Sublease without prejudice to any other remedy or right of action for rent or royalties due and owing or for any other proceeding or breach of contract; and in the event of such termination, any improvements on the Subleased Lands may be disposed of in any manner by Sublessor without any liability whatsoever to the Sublessee.

Section 7. Utility Service

Sublessee shall be responsible for all charges, duties and rates of every description including water, electricity, sewer, gas, refuse collection or any other charges, arising out of or in connection with Sublessee's operations hereunder.

Section 8. Sanitation

Sublessee shall keep its operations and improvements in a strictly clean, sanitary and orderly condition.

Section 9. Waste; Use of Premises

a. No Waste.

Sublessee shall not commit, suffer or permit to be committed any waste, nuisance, strip mining or unlawful use of the interest demised hereunder or any part thereof.

b. Negligence - Breach - Non-Compliance.

Sublessee shall use all reasonable precautions to prevent waste of, damage to, or loss of natural resources including but not limited to gases, hydrocarbons and geothermal resources, or reservoir energy on or in the Subleased Lands, and notwithstanding the provisions of Sections 1 and 16 hereof, shall be liable to Sublessor and the State for any such waste, damage or loss to the extent that such waste, damage, or loss is caused by (1) the negligence of Sublessee, its employees, servants, agents or contractors; (2) the breach of any provision of this Sublease or the Master Lease by Sublessee, its employees, servants, agents or contractors, or noncompliance with applicable federal, state or county statutes or rules and regulations; provided, however, that nothing herein shall diminish any other rights or remedies which Sublessor may have in connection with any such negligence, breach or noncompliance. With respect to any other such waste, damage or loss, Sublessee agrees to indemnify, save Sublessor and the State harmless and, at the option of he Sublessor or the State, defend each of them from any and all losses,

damages, claims, demands or actions caused by, arising out of, or connected with the operations of Sublessee hereunder as more specifically provided under Section 16 hereof. Notwithstanding the foregoing, Sublessee shall not be obligated to defend the State's title to the geothermal resources demised hereunder.

Section 10. Compliance with Laws

Sublessee shall comply with all valid requirements of all municipal, state and federal authorities and observe all municipal, state and federal laws and regulations pertaining to the Subleased Lands and Sublessee's operations hereunder, now in force or which may hereafter be in force, including, but not limited to, all water and air pollution control laws, and those relating to the environment; provided, however, no revision or repeal of the Regulations subsequent to the effective date hereof shall change the rental, royalty rate, term, or otherwise substantially change the economic terms under this Sublease; provided, further, however, that the State, acting in its governmental capacity, may by such regulations or amendments thereto made at any time regulate the drilling, location, spacing, testing, completion, production, operation, maintenance and abandonment of a well or wells or similar activity as well as the construction, operation and maintenance of any power plant or other facilities in the exercise of its police powers to protect the public health, welfare and safety as provided in the Regulations.

Sublessee shall have the right to contest or review, by legal procedures or in such other manner as Sublessee, may deem suitable, at Sublessee's sole expense, any order, regulation, direction, rule, law, ordinance, or requirement, and if able, may have the same cancelled, removed, revoked, or modified. Such proceeding shall be conducted promptly and shall include, if Sublessee so decides, appropriate appeals. Whenever the requirements become final after a contest, Sublessee shall diligently comply with the same. Sublessee also agrees that in its employment practices hereunder it should not discriminate against any person based upon race, creed, sex, color, national origin or physical handicap.

Section 11. Inspection of Premises and Records

Sublessor and its authorized representatives or the State through its authorized representatives shall have the right, at all reasonable times, to go upon the Subleased Lands for the purpose of inspecting the same, for

the purpose of maintaining or repairing said premises, for the purpose of, in the case of the State, placing upon the Subleased Lands any usual or ordinary signs, for fire or police purposes, to protect the premises from any cause whatever, or for purposes of examining and inspecting at all times the operations of Sublessee with respect to wells, improvements, machinery, and fixtures used in connection therewith, all without any rebate of charges and without any liability on the part of the State, Sublessor or any of their authorized representatives for any loss of occupation or quiet enjoyment of the interests demised hereunder, thereby occasioned.

Sublessor or its agents and the State may at reasonable times inspect the books and records of Sublessee with respect to matters pertaining to the payment of royalties to Sublessor. Complete information shall be made available to Sublessor, and the State at the request of either. In addition, qualified representatives and/or consultants designated by Sublessor or the State may examine the reports specified in this Sublease and all other pertinent data and information regarding wells on the Subleased Lands and production therefrom. In the event of surrender of all or a part of the Subleased Lands, Sublessee shall furnish Sublessor and the Chairman all data with respect to such surrendered lands including interpretations of such data for use in future lease negotiations with third parties. Sublessee agrees on written request to furnish copies of such information to Sublessor's qualified representatives or consultants and the Chairman.

Section 12. Geothermal Operations

Sublessee shall carry on all work hereunder with due regard for the preservation of the property covered by this Sublease and with due regard to the safety and environmental impact of its operations and in accordance with the terms and conditions set forth in the Master Lease including but not limited to, paragraphs 13(A) through (w) thereof, and observe and perform all of Sublessor's duties, obligations and actions to be so observed or performed thereunder.

Section 13. Liens

Sublessee will not commit or suffer any act or neglect whereby the State, Sublessor or the surface owner(s) or occupier(s) of the Subleased Lands shall become subject to any attachment, lien, charge or encumbrance whatsoever, and shall indemnify and hold harmless the Sublessor, the

State and the surface owner(s) and occupier(s), against all such attachments, liens, charges and encumbrances and all expenses resulting from any such act or neglect on the part of the Sublessee.

Sublessee will, before commencing construction of any improvements or any drilling operations or laying any pipelines or doing any other work on or within the Subleased Lands, deposit with Sublessor, the State and the surface owner(s) and occupier(s) of such lands a bond or certificate thereof naming Sublessor, the State and said surface owner(s) and occupier(s) as obligees in a sum of not less than one hundred per cent (100%) of the cost of such construction, drilling or pipeline work and in form and with surety satisfactory to Sublessor, the State and the surface owner(s) and occupier(s) guaranteeing the completion of such work free and clear of all mechanics' and materialmen liens.

Section 14. Assignment or Sublease

This Sublease may be assigned or sublet to any person qualified under the applicable laws and regulations with the prior written consent of the State and Sublessor which consent may be withheld by either or both in their sole discretion. Notwithstanding the above, upon the consent of the Sublessor, and the State if necessary, Sublessee may assign or sublet its interest hereunder to an entity wholly owned and controlled by Sublessee or Mr. Charles L. Culton upon written notice to Sublessor.

Section 15. Indemnity

Sublessee agrees to hold harmless and indemnify the State and its divisions, departments, agencies, officers, agents and employees, Sublessor, its officers, directors, employees and agents, together with the owner(s) or lessee(s) of the surface of the Subleased Lands, if any, from any and all liabilities and claims for damages and/or suits for or by reason of death or injury to any person or damage to property of any kind whatsoever, whether the person or property of Sublessee, its agents, employees, contractors, or invitees, or third persons, from any cause or causes whatsoever caused by any occupancy, use, operation or any other activity on the Subleased Lands or its approaches, carried on by Sublessee, its agents, employees, contractors, or invitees, in connection therewith; and Sublessee agrees to indemnify and save harmless the State, the Board, the Chairman, the Department of Land and Natural Resources, Sublessor, its officers, directors,

employees and agents, the owner(s) or lessee(s) of the surface of the Subleased Lands if there is one, and their officers, agents, and employees from all liabilities, charges, expenses (including counsel fees) and costs on account of or by reason of any such death or injury, damage, liabilities, claims, suits or losses.

Section 16. Liability Insurance

Prior to entry upon the Subleased Lands, Sublessee shall obtain, at its own cost and expense, and maintain in force during the entire term of this Sublease, a policy or policies of comprehensive general public liability and property damage insurance from any company licensed to do business in the State covering liability for injuries to persons, wrongful death, and damages to property caused by any occupancy, use, operations or any other activity on Subleased Lands carried on by Sublessee, its agents or contractors in connection therewith, in the following minimum amounts:

(i) Comprehensive General Bodily Injury Liability - $300,000.00 each occurrence, $1,000,000.00 aggregate.

(ii) Comprehensive General Property Damage $50,000.00 each occurrence, $100,000.00 aggregate.

Liability coverage for injury or damage to persons or property caused by explosion, collapse and underground hazards are to be included prior to initiation of operations to drill a well for geothermal discovery, evaluation or production. Sublessee shall evidence such additional coverage to the Chairman and Sublessor prior to initiation of drilling operations. If the land surface and improvements thereon covered by this Sublease are owned or leased by a person other than the State or Sublessor, the owner(s) and lessee(s), if any, of the surface and improvements shall be a named insured. The State, the Board, the Chairman, and the Department, in addition to Sublessor, shall also be named insureds.

No cancellation provision in any insurance policy shall release Sublessee of the duty to furnish insurance during the term of this Sublease. A signed and complete, certificate of insurance, containing the special endorsement prescribed in the regulations and indicating the coverage required by this paragraph, shall be submitted to the Chairman and Sublessor prior to entry upon the

Subleased Lands. At least thirty (30) days prior to the expiration of any such policy, a signed and complete certificate of insurance, indicating the coverage required by this paragraph, showing that such insurance coverage has been renewed or extended, shall be filed with the Chairman and Sublessor.

Section 17. Bond Requirements

The Sublessee shall file with the Board and the Sublessor, a bond in the amount of $10,000.00 in a form approved by the Board and Sublessor and made payable to the State and Sublessor, conditioned upon faithful performance of all terms, provisions and requirements of Chapter 182, Hawaii Revised Statutes, the Regulations this Sublease, and Master Lease also conditioned upon full payment by Sublessee of all damages suffered by the occupiers of the Subleased Lands for which Sublessee is legally liable.

Section 18. Sublessor's Lien

Sublessor shall have a lien on all buildings and improvements placed on the Subleased Lands and all property placed thereon whether the same is exempt from execution or not, for all such costs, attorneys' fees, rent or royalties hereunder and all taxes and other charges, if any paid by Sublessor on behalf of Sublessee and for the payment of all money to be paid by Sublessee hereunder, and such lien shall continue until the amounts due are paid.

Section 19. Surrender

Subject to revocation by Sublessor in accordance with Section 19 hereof, if Sublessee has complied fully with all the terms, covenants and conditions of this Sublease, the Master Lease and the Regulations, Sublessee may surrender, at any time and from time to time, this Sublease in its entirety or with respect to any portion of the interests demised hereunder. For the purposes hereof, if there are no deficiencies with respect to the land to be surrendered pertaining to public health, safety, conservation of resources and preservation of the environment, Sublessee will be deemed to have complied fully with all of the terms, covenants and conditions of this Sublease, the Master Lease and the Regulations if Sublessee shall have paid all rents and royalties due hereunder and an additional two (2) year's rent as set forth in Section 4.A hereof, or in the event of a partial surrender, two (2)

year's rent prorated by reference to that portion of interest described in this Sublease which is to be surrendered. No deficiencies shall be deemed to exist unless, within sixty (60) days after delivery of the document of surrender, Sublessor has notified Sublessee in writing of any deficiency claimed to exist. If there are no deficiencies as aforesaid, such surrender shall be effective as of the delivery to Sublessor of the document of surrender executed by Sublessee describing this Sublease or that portion of the interest demised hereunder which is to be surrendered. If there are claimed deficiencies with respect to the interest to be surrendered pertaining to public health, safety, conservation of resources and preservation of the environment at the time of delivery of the document, such surrender shall not become fully effective until such time as such deficiencies have been corrected or determined not to exist. However, provided that if Sublessee corrects such deficiencies within sixty (60) days of notification thereof, or if the deficiencies cannot be corrected within sixty (60) days, commences in good faith and thereafter proceeds diligently to correct such deficiencies, then, in such case, although the surrender shall not be fully effective upon delivery of the document of surrender, the Sublessee shall be relieved of any other or further obligations and liability as to this Sublease or as to that portion of the interest demised hereunder which has been submitted for surrender, excepting Sublessee's observance and performance of the conditions, covenants and agreements to be observed and performed by Sublessor under the Master Lease regardless from where such liabilities or duties arise, including, without limiting the generality of the foregoing, all obligations to pay rent, to commence mining operations or to be diligent in exploration or development of geothermal resources. During the notification and correction periods above described, this Sublease shall not be subject to revocation by Sublessor except for a failure by Sublessee after notification to correct such deficiencies within the time period and in the manner hereinabove described or a breach of the terms of this Sublease as to any of the remaining interests or rights retained by Sublessee, or upon the occurrence of an Event of Default under the Development Agreement. Except as aforesaid, nothing herein contained shall constitute a waiver of any liability or duty Sublessee may have with respect to the Sublease surrendered as a result of any activity conducted on the Subleased Lands or under this Sublease prior to such surrender. Upon the surrender of this Sublease as to all or any portion of the interests covered thereby, or upon any other termination of this Sublease except by

revocation pursuant to Section 6 hereof, Sublessee shall be entitled to all equipment, buildings, and plants placed in and on the Subleased Lands and Sublessor may require Sublessee to remove the same and restore the premises to a similar condition prior to any development or improvements, to the extent reasonably possible. This Sublease may also be surrendered if as a result of a final determination by a court of competent jurisdiction, Sublessee is found to have acquired no rights in or to the minerals on reserved lands, nor the right to exploit the same, pursuant to this Sublease, and, in such event, Sublessor shall pay over to the person entitled thereto the rentals, royalties and payments paid to Sublessor pursuant to this Sublease.

Section 20. Acceptance of Rent and Royalties not a Waiver by Sublessor

The acceptance of rent or royalties by Sublessor shall not be deemed a waiver of any breach by Sublessee of any term, covenant or condition of this Sublease, nor of Sublessor's right to give notice of default and to institute proceedings to revoke this Sublease in the manner set out in Section 6 hereof, and the failure of Sublessor to insist upon strict performance of any such term, covenant or condition, or to exercise any option conferred, in any one or more instances, shall not be construed as a waiver or relinquishment of any such term, covenant, condition or option.

Section 21. Master Lease

Sublessee recognizes and agrees that this Sublease is in all respects, subject and subordinate to the terms of the Master Lease, and in the event there is any conflict between the provisions of the Master Lease and this Sublease, the provisions of the Master Lease shall control.

Section 22. Extension of Time of Performance

Notwithstanding any provision contained herein to the contrary wherever applicable, Sublessor may for good cause and in its sole discretion, allow additional time beyond the time or times specified herein to Sublessee, in which to comply, observe and perform any of the terms, conditions, and covenants contained herein.

Section 23. No Warranty of Title; Surface Owner Consents

Neither the State or Sublessor warrants title to the Subleased Lands or the geothermal resources and geothermal by-products which may be discovered thereon. Where Sublessee is not the surface owner, Sublessee agrees that before entering, occupying, or purposes using any of the surface of the Subleased Lands, for any and all purposes authorized by this Sublease, Sublessee will first secure the written consent or waiver of the owner(s), occupier(s) or lessee(s) of the surface of the Subleased Lands (which may include Sublessor); second, make payment of the damages to crops or other tangible improvements to the owner thereof; or third, in lieu of either or both of the foregoing provisions, execute a good and sufficient bond or undertaking, payable to and in an amount specified by Sublessor and the State for the use and benefit of the surface owner(s) or lessee(s) or occupier(s) of such land, to secure payment of such damages to the crops or tangible improvements of the surface owner(s) or lessee(s) or occupier(s) of said land as may be determined and fixed in an action brought upon the bond or undertaking in a court of competent jurisdiction against the principal and sureties thereon, such bond or undertaking to be in the form and in accordance with the rules and regulations. This Sublease is issued subject to any and all right, title and interest of the purchaser, title holder(s) or owner(s) of the surface of the Subleased Lands, and any successor in interest to any such purchaser(s), title holder(s) or owner(s) of the Subleased Lands, any other provision in this Sublease to the contrary notwithstanding.

Section 24. Commingled Production - Plans - Approvals- Accuracy

Subject to testing the absolute open flow potential of wells, whether on the Subleased Lands or other lands, as set forth in Section 5 hereof, geothermal resources from any two or more wells, regardless of whether such wells are located on the Subleased Lands, may be commingled when the metering system used to measure geothermal resources has been approved by Sublessor and the State. Prior to the installation of the metering system, Sublessee shall submit for approval a schematic drawing of the proposed system and specifications of the major equipment components. Sublessor and the State may jointly determine if acceptable standards of accuracy for measuring geothermal resources have been obtained, and may approve commingling of geothermal resources. The metering

equipment shall be maintained and operated in such a manner as will meet acceptable standards of accuracy. Use of the equipment shall be discontinued at any time upon determination by the State and Sublessor that standards of measurement accuracy or quality are not being maintained, with such commingling stopped until measurement accuracy has been obtained. In the event that the quality and composition of the geothermal resources to be commingled are substantially different, it shall not be approved by the State and Sublessor until acceptable standards and methods of payments are established. If less than the total flow is to be utilized in a plant or facility, then the reduction in flow for each well shall be in the proportion which the total open flow of each contributing well bears to the total open flows of all contributing wells.

Section 25. Suspension of Operations

In the event of any disaster or pollution, or likelihood of either, having or capable of having a detrimental effect on public health, safety, welfare, or the environment caused in any manner or resulting from operations under this Sublease, Sublessee shall suspend any testing, drilling and production operations, except those which are corrective, or mitigative, and immediately and promptly notify the Chairman and Sublessor. Such drilling and production operations shall not be resumed until adequate corrective measures have been taken and authorization for resumption of operations has been made by the Chairman and Sublessor.

Section 26. Diligent Operations Required

Consistent with Sublessee's obligations contained in the Development Agreement, Sublessee shall be diligent in the exploration and development of the geothermal resources under the Subleased Lands. Sublessee recognizes that failure to perform diligent operations may subject the Master Lease to revocation by the State. Diligent operations mean exploratory or development operations on the Subleased Lands including without limitation geothermal surveys, heat flow measurements, core drilling, or the drilling of a well for discovery, evaluation, or production of geothermal resources.

The provisions hereof shall be construed and applied with reference and in relation to geological and engineering determinations and economic and market conditions with respect to geothermal resources in the area or

field in which the Subleased Lands is situated. In the event Sublessor believes, based on reasonable cause, that Sublessee has failed to perform diligently, Sublessor may revoke this Sublease as provided herein.

Section 27. Production of By-Products

Sublessee shall have no obligation to save or process, any geothermal by-products unless such saving or processing, independent of revenues or value received from the production of other geothermal resources, including other geothermal by-products, is economically feasible.

Section 28. Records and Reports

A. Accounting Data. No later than the twenty-fifth (25th) day of every calendar month following the effective date of this Sublease, Sublessee shall submit to the State and Sublessor a detailed accounting statement for sublease operations specifying all charges paid and credits received under this Sublease, including but not limited to information showing the amount of gross revenue derived from all geothermal resources produced, shipped, used or sold and the amount of royalty due. Sublessee shall, at the option of either Sublessor or the State or both, provide more detailed statements and explanatory materials to aid Sublessor and the State, in interpreting and evaluating Sublessee's accounting statement. All such statements are subject to audit and revision by Sublessor or the State and Sublessee agrees that Sublessor and the State may inspect all of Sublessee's books, records and accounts relating to operations under this Sublease, including but not limited to the development, production, sale, use or shipment of geothermal resources at all reasonable times. Any statutory or other rights that Sublessee may have to object to such inspection by Sublessor or the State are hereby waived.

B. Exploration Data. Except as may be otherwise provided in the Development Agreement, Sublessee agrees to supply to Sublessor and the State within thirty (30) days of the completion thereof, or the completion of any recorded portion thereof, all physical and factual exploration results, logs, surveys and any other data in any form resulting from operations under this Sublease or from any surveys, tests, or experiments conducted on the Subleased Lands by Sublessee or any person or entity acting with the consent of Sublessee or with information or data provided by Sublessee. Sublessee agrees to supply to Sublessor and the State within twenty-five (25) days of

the completion thereof, or the completion of any recorded portion thereof, the results of all geological, geophysical or chemical tests, experiments, reports and studies, including but not limited to reservoir studies and tests, experiments, reports or studies relating to reinjection or reservoir depletion irrespective of whether the result of such tests, experiments, reports or studies contain sensitive or proprietary or confidential information or trade secrets. Sublessee further agrees that any statutory or other rights or objections it may have to prevent disclosure of any such tests, experiments, reports or studies referred to in this paragraph by Sublessor are hereby waived. Notwithstanding any provisions hereof, however, all data and documents supplied by Sublessee pursuant to this section shall be deemed to have been "obtained in confidence" and may be disclosed to other persons only with the written consent of Sublessee or upon a determination by Sublessor and the State that such disclosure is in the public interest or as otherwise provided by law or regulation.

C. Waiver by Sublessee. Sublessee hereby waives any and all rights and objections it may have to prevent an examination of the books and records at reasonable times of any individual, association, or corporation which has transported for, or received from Sublessee, any geothermal resources produced from the Subleased Lands. Further, Sublessee waives any and all rights and objections it may have to prevent an examination and inspection of the books and records, at reasonable times, of any such individual, association or corporation with respect to such individual's, association's, or corporation's, or to Sublessee's operations, wells, improvements, machinery and fixtures used on or in connection with the Subleased Lands.

Sublessee does hereby waive any statutory or other right or objection to prevent disclosure to Sublessor or a duly authorized employee or representative of Sublessor or the State and any of its authorized representatives of any information, reports, data, or studies of any kind, filed by Sublessee with any public agency, federal, state or local, relating to the Subleased Lands, the geothermal resources thereunder, or any operations carried out in connection with this Sublease irrespective of whether such information, reports, data, or studies of any kind contain sensitive or proprietary or confidential information or trade secrets. Any and all such information, reports, data, or studies of any kind filed by Sublessee with any public agency, federal, state or local,

including all information filed with the State and/or transmitted to Sublessor pursuant to any paragraph of this Sublease, shall be available at all times for the use of Sublessor or the State and their duly authorized representatives for any purpose. Notwithstanding any provisions hereof, however, any information, reports, data or studies obtained by Sublessor or the State from any public agency and which are not public records shall be deemed to have been "obtained in confidence" and may be disclosed to other persons only with the written consent of Sublessee or upon a determination by Sublessor and the State that such disclosure is in the public interest.

Section 29. Force Majeure

If Sublessee is rendered unable to wholly or in part by force majeure to carry out its obligations under this Sublease, Sublessee shall give to Sublessor prompt written notice of the force majeure. Thereupon, any obligations of Sublessee to perform so far as they are affected by the force majeure shall be suspended during the continuance of the force majeure and the primary term or any continuation period shall be extended for a period equal to the period of suspended performance caused by the force majeure. Sublessee shall use all possible diligence to remove or correct the force majeure, but this shall not require the settlement of strikes, lockouts or other labor difficulties. In no event shall any extension affect the maximum term of this Sublease.

Section 30. Unit or Cooperative Plans

Sublessee may, with the written consent of the Board and Sublessor, utilize the Subleased Lands or portions thereof under a unit, cooperative or other plan of development or operation with other state, federal or privately owned lands for the drilling and production of one or more geothermal wells in accordance with of the Regulations.

Section 31. Notices

Sublessee may give any notice or deliver any document hereunder to the State by mailing the same by registered mail addressed to the State at DEPARTMENT OF LAND AND NATURAL RESOURCES, P. O. Box 621, Honolulu, Hawaii 96809 or by delivering the same. All notices required to be sent or given to Sublessor shall be so sent or delivered to BARNWELL GEOTHERMAL CORPORATION, 2828 Paa Street, Suite 2085, Honolulu, Hawaii 96819, attn: Martin L. Jokl. All

notices required to be sent or given to Sublessee hereunder shall be sent or given to _____

_____.

For the purposes of this section, either party may change its address by written notice to the other. In case of any notice or document delivered by registered mail, the same shall be deemed delivered when deposited in any United States Post Office, properly addressed as herein provided, with postage fully prepaid.

Section 32. Restoration of Premises

Upon the revocation, surrender or expiration of this Sublease, the State, Sublessor or surface owner(s) may require Sublessee to restore the Subleased Lands to their original condition insofar as it is reasonable to do so within ninety (90) days thereof, except for such roads, excavations, alterations or other improvements which may be designated for retention by the surface owner, the State or its agency having jurisdiction over said lands. When determined by the State, Sublessor, surface owner or such State agency, cleared sites and roadways shall be replanted with grass, shrubs, or trees by Sublessee.

Section 33. Headings

The paragraph headings throughout this Sublease are for the convenience of Sublessor and Sublessee and are not intended to construe the intent or meaning of any of the provisions thereof.

Section 34. Insolvency

In the event Sublessee at any time during the term hereof is insolvent under any of the provisions of the Federal Bankruptcy Act, or makes a voluntary assignment of his assets for the benefit of creditors, or is adjudged a bankrupt, either upon Sublessee's voluntary petition in bankruptcy, or upon the involuntary petition of Sublessee's creditors, or any of them, or should an attachment be levied and permitted to remain for any unreasonable length of time upon or against the interest, rights or privileges of Sublessee in or to any geothermal resources produced from the wells drilled by Sublessee upon the Subleased Lands, then, upon election by Sublessor, all of the interests, rights, and privileges of Sublessee in and to all geothermal resources produced and saved from the Subleased Lands by reason of Sublessee's operations thereon, shall terminate upon receipt of written notice from Sublessor advising that Sublessor has so elected. In such

event Sublessor shall have, and Sublessee, by the acceptance hereof, hereby gives Sublessor the right, option and privilege to cancel and terminate this Sublease and all of the terms and provisions granted hereby, and all of the rights and privileges of Sublessee in and to or upon the Subleased Lands and in and to any geothermal resources produced and saved from the leased lands by reason of Sublessee's operations thereon, and all of Sublessee's rights and privileges granted by this Sublease shall terminate immediately, upon receipt of written notice from Sublessor that Sublessor has so exercised its option.

Section 35. Subsidence.

Any subsidence to the Subleased Lands or adjacent lands shall be considered pursuant to the Regulations.

Section 36. Workmen's Compensation Insurance

Sublessee shall at all times in any and all operations under this Sublease and in any and all work in and upon the leased lands carry full and complete Workmen's Compensation Insurance covering all employees of Sublessee.

Section 37. Successors and Assignors

The term "Sublessor" herein shall mean and include Sublessor, its legal successors and assigns, and the term "Sublessee" herein or any pronoun used in place thereof shall mean and include the masculine or feminine, the singular or plural number, and jointly and severally individuals, firms or corporations, and their and each of their respective heirs, successors, personal representatives and permitted assigns, according to the context hereof.

Section 38. Severability

If any provision herein is judicially determined, to be invalid, it shall be considered deleted herefrom and shall not invalidate the remaining provisions.

Section 39. Geothermal Ownership

If Sublessee hereunder is the surface landowner it is mutually agreed that issuance of this Sublease by Sublessor and acceptance thereof by Sublessee shall not be

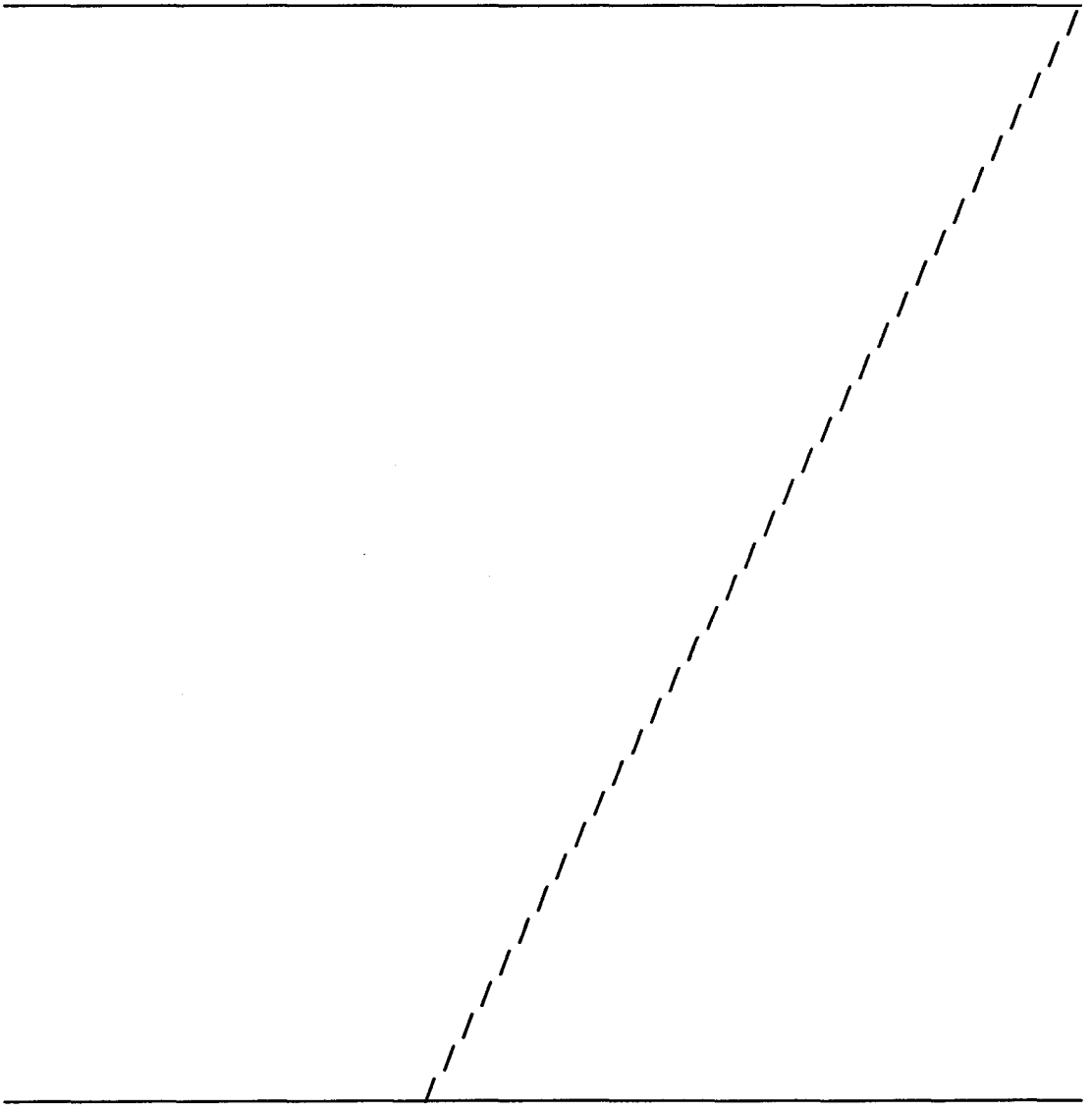
deemed or construed to be a waiver of, and shall be without prejudice to, any claim of ownership to the geothermal resources by Sublessee and Sublessor incidental thereto.

Section 40. Lease Terms vs. Regulations

Unless indicated otherwise herein, the Regulations shall supersede any of the lease provisions herein which conflicts with said Regulations.

Section 41. Applicability of Lease

This Sublease is being issued to Sublessee as holder of the occupier's rights to a mining lease and



shall not be applicable to those parcels of lands where Sublessee has not acquired such rights.

IN WITNESS WHEREOF, the parties hereto have caused these presents to be executed this _____ day of _____, 19___.

BARNWELL GEOTHERMAL CORPORATION

By_____
Martin L. Jokl
President

SUBLESSOR

MORGAN OIL, LTD.

By_____
Charles L. Culton
President

SUBLESSEE

CONSENT OF STATE OF HAWAII

By_____

Dated: _____

By_____

Dated: _____

"STATE"

State)
) SS
COUNTY OF _____)

On this _____ day of _____, 19___, before me appeared _____ to me personally known, who, being by me duly sworn, did say that he is the President of Barnwell Geothermal Corporation, and that the seal affixed to the foregoing instrument is the corporate seal of said corporation, and that said instrument was signed and sealed on behalf of said corporation by authority of its Board of Directors, and the said acknowledged that he executed said instrument as the free act and deed of said corporation.

_____
Notary Public, State

My commission expires: _____

State)
) SS
CITY AND COUNTY OF HONOLULU)

On this _____ day of _____, 19___, before me appeared _____ to me personally known, who, being by me duly sworn, did say that he is the _____ of _____, and that the seal affixed to the foregoing instrument is the corporate seal of said corporation, and that said instrument was signed and sealed on behalf of said corporation by authority of its Board of Directors, and the said _____ acknowledged that he executed said instrument as the free act and deed of said corporation.

_____
Notary Public, State

My commission expires: _____

EXHIBIT C

GeothermEx, Inc.
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RICHMOND, CALIFORNIA 94804-5829

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CABLE ADDRESS GEOTHERMEX
TELEX 709152 STEAM UD
FAX (415) 527-8164

BARNWELL

DRAFT

DRILLING WORKSHEET

PUNA WELL .....

PUNA DISTRICT - HAWAII

WELL DATA:

LOCATION:

ELEVATION:

OBJECTIVE: Drill steam producer to 7,500 MD (maximum)

STATUS: New well

DRAFT

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SIMPLIFIED GEOLOGY

FORMATION	DEPTH	LITHOLOGY
Alluvium	0′ - 150′	Alternating layers of silt, clay and unsorted basalt gravel.
Sub-aerial Basalt	150′ - 1,300′	Dense basalt with alternating layers of vent tubes. Severe losses of circulation expected from 300′ to 1,300′
Water Table	620′ - 650′	Depth to sea level
Submarine Basalt	1,300 - TD	Dense basalts with alternating layers of volcanic ash. Losses of circulation possible below 4,300′

DRILLING PROGRAM

The following drilling program supplements the Geothermal Drilling Permit application submitted herewith. This well is an exploratory hole, aimed principally to obtain information and possible production from depths below 4,000 feet in the Puna KGRA, and to confirm the resource in the area located westward of the Kaopoho State wells drilled in 1981-1982 and westward to north-west of the HGPA well drilled in 1976.

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I. PRELIMINARY CIVIL WORK

WELL PAD

Build a well pad and access road, according to civil engineer's specifications. Approximate rig and mud pit configuration and distribution are shown on Figure 1. Pad floor must be conformed of selected, compacted material, particularly where rig is to be placed. Soil compaction must be suitable to support the rig gross dead-weight plus 400,000 pounds live-loads. If soil minimum requirements can not be fulfilled, arrange to build crossed wood-matting from 6"X6" pieces to distribute the rig's weight. Where grading of the original soil is required, minimize the volume of fill, particularly where the heavier machinery is to be placed. Rig location must be over cut area or improved and compacted material. Access roads must be able to support heavy and frequent traffic. The area must be properly drained, avoiding accumulation of water around the work area.

CELLAR

Build a reinforced concrete cellar, 12 X 12 X 10 feet deep, according to civil engineer's specifications. Remove any large boulder rocks from the bottom. If feasible, place a drain from the cellar bottom to the mud sump, minimum size 6-inches with a 2% gradient sumpward.

MUD PIT

Build a mud sump, according to the civil engineer's specifications, of 300,000 gallon useful capacity, to provide for drilling and for initial

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phases of the well testing. Line the sump with bentonite or, if so required by State regulations, with plastic material.

CONDUCTOR PIPE AND RAT-HOLE

Drill a 36-inch hole to 50 feet, centered in the cellar, using a rat-hole digging auger. Cement a 30-inch steel pipe (conductor) into the hole, using a cementing contractor, and maintain cement level in the annular space. Use "ready-mix" cement, prepared with Class A cement, for temperatures below 170° F, similar to ASTM 150 Type I cement, for moderate sulfate resistance. The recommended water/cement ratio, according to API, is 0.46 by weight of cement (5.2 gallons per sack). The slurry bulk volume is 1.18 cu.ft/sack. This slurry thickens in about 3 hours and reaches 2,000 psi compressive strength after 72 hours, at normal temperature conditions. Conductor contractor must also dig the rig's rathole, using a 14 or 16-inch auger; the location and depth shall be specified by the drilling contractor.

II. WELL DRILLING

26-INCH STAGE

1. Move-in drilling equipment. A diesel-electric rig will be used. Weld-on a 30 X 20 inch adaptor flange. Attach 30-inch flow nipple with fill-up and flow lines (figure 2).

2. Install H2S monitoring equipment. Begin mud logging. Drill a 12-1/4-inch pilot hole to 650 feet. Notify State officer 24 hours prior to taking water sample. At 650 feet depth, rig up bailing

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tools. Bail out well until clear fluid is withdrawn from bailer. Obtain two separate samples of fluid. Send samples to lab for analysis. Have state officer to witness the sampling procedure. Condition the hole and resume drilling 12-1/4-inch hole to approximately 1,400 feet. Significant losses of circulation are expected to occur below 300 feet level. Attempt to cure losses using high viscosity mud and LCM. If losses persist, drill ahead with mud loss.

Precise casing point will be selected by site geologist and drilling engineer, on basis of lithology, loss circulation zones, and presence of firm rock. Take a drift shot at casing depth. Pick up 17-1/2-inch hole opener with 12-1/4-inch bit, reamer, 12-inch shock absorber and 17-1/2-inch stabilizers, and open hole to 1,400 feet. Repeat same operation using 26-inch hole opener and 17-1/2-inch bit, 26-inch reamer, shock absorber and stabilizer.

20-INCH CASING

3. Clean and condition hole. Run 20-inch, 106 lb/ft, Grade K-55, Buttress threaded casing to 1,400 feet. Equip casing as follows:

- 20-inch guide shoe, welded
- One casing joint above shoe
- 20-inch stab-in collar/float

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- One centralizer above shoe; next, one joint up from shoe, and one every 90 feet (every third joint thereafter)

4. Run into the hole with drill pipe and stinger tip. Stab into collar and circulate 300 cu.ft of water and 300 cu.ft of light cement and calcium chloride preflush. Cement according to Casing and Cementing Prognosis, page 19.

5. Wait on cement for 6 hours thickening time. Cement returns are unlikely to occur. In case returns are not observed during cementing, pick up and run 1-1/4-inch tubing through annular space. Tag top of cement. Mix and pump Class G cement blended with 2% calcium chloride. Circulate to surface. Pull tubing and wash while laying down. Wait on cement 6 hours and repeat if cement top settles.

6. Cut 20-inch casing and install the 20-inch BOP assembly as follows (see figure 3):

- Slip-on, 20-inch, 2M, ANSI Series 600, casing head, equipped with two 3-inch outlets.

- 20-inch, 2M, ANSI 600, drilling spool

- 20-inch, 2M, AMSI 600, annular BOP

- 20-inch pitcher nipple

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Test BOP assembly and casing to 500 psi according to instructions. Notify State official and have him witness the test. Report test on daily drilling report.

17-1/2-INCH STAGE

7. Drill out float collar and cement with 17-1/2-inch mill tooth bit and slick assembly; treat mud for cement contamination with sodium bicarbonate and soda ash. Pull out when 20 inch shoe has been drilled and run into the hole with new 17-1/2-inch bit, reamer, shock absorber, 17-1/2-inch stabilizer, and drill collars. Drill a straight hole to approximately 2,700 feet. Control lost circulation with LCM (cottonseed, mica, nut hull plug, or prepare a bentonite/diesel/cement "gunk" squeeze as follows:

-For 100 barrels batch:

1. 140 sacks bentonite
2. 70 barrels diesel
3. 140 sacks Portland cement

Blend bentonite and diesel together in pre-mix tank, mix cement last and pump immediately using truck pumps. Pump only through open-ended drill pipe.

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8. If necessary, drill ahead with lost circulation, as long as connections are easily made and small drag on the bit is detected while tripping out of the hole. Have minimum 1,500 bbls of emergency water storage on location, connected to circulation/pumping manifold. Drill well with mud. Control drift angle with stiff drilling assembly. Take a drift shot and maximum temperature measurement at casing point.

13-3/8-INCH CASING

9. At casing point, circulate hole clean and short-trip collars. Tag bottom and circulate bottoms up before tripping out for running casing. Run 2,700 feet of 13-3/8-inch, 68 lbs/ft, Grade L-80, Vallourec-VAM threaded casing. Equip casing as follows:

   - 13-3/8-inch guide shoe, welded
   - one joint of 13-3/8-inch casing
   - 13-3/8-inch insert float valve
   - One centralizer above shoe, next one on first collar, then every 90 feet (every third joint)

Based on the knowledge of the circulation losses, a 13-3/8-inch stage cementing collar should be available on site and ready to be placed in the casing. Two stage cementing shall be performed if necessary, positioning the cementing port either in correspondence

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with the more severe loss zone or directly below the 20" casing shoe. The second stage will be pumped through casing.

10. Run casing while filling each three joints. Tack-weld bottom 3 collars, use thread lock compound on first 3 collars. Circulate 200 cu.ft of water and 200 cu.ft of pre-flush ahead of cement. Cement through casing as per the Casing and Cementing Prognosis, page 22.

11. Monitor returns and prepare to run 1-inch pipe into annular space to do top-job cementing, if required. If annular cementing is required, tag top of cement and pump Class G cement blended with 40% Silica flour, 2% calcium chloride, 0.65% CFR-2. Repeat this operation until the annulus has been fully cemented.

12. Land 13-3/8-inch casing. Install 13-3/8-inch BOP assembly (see figure 4) as follows:

- Slip-on-weld, 13-3/8 X 13-5/8-inch, 3M, ANSI Series 900, casing head, equipped with two 3-inch flanged and valved outlets

- 13-5/8-inch, 3M, ANSI 900 double ram (pipe and blind ram) preventer

- 13-5/8-inch, 3M, ANSI 900, annular BOP

- Pitcher nipple

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Have certified welder to pre-heat, weld inside and outside and post heat 13-3/8-inch casing and casing head, according to API recommended procedure (API - Spec 6A). Test welds to specified pressure. Test BOP assembly and casing at 1,000 psi according to instructions. Notify State official and have him witness the test. Record test on daily drilling report.

12-1/4-INCH STAGE

13. Drill out float collar and cement with 12-1/4-inch bit and slick assembly. Treat mud with sodium bicarbonate and soda ash to control viscosity while drilling cement. Pull out when 13-3/8-inch shoe has been drilled and run into the hole with new 12-1/4-inch bit, reamer, shock absorber, 12-1/4-inch stabilizer, drill collars. Drill a straight hole to approximately 4,000 feet. Control hole deviation using a stiff bottomhole assembly. Control losses of circulation with LCM or bentonite/diesel/cement squeezing. If necessary, spot specially designed, water seeking cement plugs and squeeze them using hesitation squeeze methods. Drill well with mud to casing depth.

9-5/8-INCH CASING

14. At casing point, circulate hole clean and short-trip collars off the bottom. Tag bottom and circulate bottoms up with low viscosity mud before tripping out for running casing. Run 4,000 feet of 9-5/8-inch, 47 lbs/ft, Grade C-90, Vallourec-VAM threaded casing. Equip casing as follows:

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- 9-5/8-inch float shoe, welded (weld C-90 casing according to API Spec.5AC)

- one joint of 9-5/8-inch casing

- 9-5/8-inch super-seal float collar

- 9-5/8-inch stage cementing collar (if needed, to prevent cement loss)

- one centralizer above shoe, next one on first collar, rest of centralizers to be positioned as determined by cementing contractor

As for the 13-3/8-inch casing, depending on the occurrence of losses of circulation, a 9-5/8-inch stage cementer should be available on site and ready to be placed in the casing string. The location of the stage cementer shall be decided either according to the location of the losses of circulation or as close as possible to the 13-3/8-inch casing shoe. The second stage will be cemented through casing.

15. Run casing while filling on every third joint. Tack weld bottom three collars. Welding on C-90 casing must follow the procedure recommended in API Spec 5AC. Use thread compound on first three collars and float equipment. Circulate ahead of cement 400 cu.ft of water, followed by 200 cu.ft of pre-flush. Cement as per Casing and Cementing Prognosis, page 25.

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16. During cementing, monitor returns and prepare to run flush jointed tubing into annular space to do top-job cementing if required. If annular cementing is required, tag cement top with tubing and pump Class G cement blended with 40% silica flour, 2% calcium chloride, 0.65% CFR-2. Repeat operation as many times as necessary to fill up the annulus with cement.

17. After plug has been bumped, or after last top-job is completed, drain and wash BOP equipment, unbolt at casing head flange and install and secure casing aligning slips into casing head bowl. Wait on cement 12 hours.

18. Land 9-5/8-inch casing to specified length above the casing head. Clean and prepare casing according to instructions from manufacturer. Install 13-5/8-inch X 10-inch, 3M, expansion spool equipped with special high temperature packing sleeve.

19. Install the 8-1/2-inch BOP assembly above expansion spool (see figures 5 and 6) as follows:

    For mud drilling:

    - 10-inch, 3M, ANSI 900, gate valve
    - 10 X 13-5/8-inch, 3M, AMSI 900, cross-over spool
    - 13-5/8-inch, 3M, ANSI 900, double ram BOP (pipe and blind rams)

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- 13-5/8-inch, 3M, ANSI 900, annular BOP

- 12-inch pitcher nipple

For stiff-foam/aereated mud drilling:

- 10-inch, 3M, ANSI 900, gate valve

- 10 X 13-5/8-inch, 3N, AMSI 900, cross over spool

- 13-5/8-inch, 3M, ANSI 900, single pipe ram (solid) BOP

- 13-5/8-inch, 3M, ANSI 900, banjo box, equipped with 10-inch, 3M, AMSI 900, hydraulically activated side valve

- 13-5/8-inch, 3M, ANSI 900, double ram (pipe and blind rams) BOP

- 13-5/8-inch, 3M, ANSI 900, annular BOP

- Grant rotating/stripping head

Test BOP assembly and casing after closing 10-inch diverter valve on banjo box. Test pressure to 1,000 psi. Notify State official and have him witness the test. Record test on daily drilling report.

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8-1/2-INCH STAGE

20. Install H_2S abatement system, and muffler (see figure 7) to be used when air/foam drilling system is activated. Drill out float collar and cement with 8-1/2-inch bit and slick assembly. Treat mud with sodium bicarbonate and soda ash as required to control the viscosity. Pull out when 9-5/8-inch shoe has been drilled and run into the hole with new 8-1/2-inch bit, reamer, high temperature shock absorber, 8-1/2-inch stabilizer, drill collars. Drill a straight hole using mud until the first important loss circulation zone is encountered. At that moment, decision will be made on whether to continue drilling with water, using a slick assembly and pumping mud "pills" at every connection to displace the drill cuttings away from the bit, or to switch to aereated water or stiff foam system. If water drilling with a slick assembly is chosen, there will be less control on the hole deviation and angle drift measurements must be made at shorter intervals (see Angle Survey Program on page 30).

21. Drill well to a maximum of 7,500 feet. If no production zone is encountered to this depth, log the well and complete as an injection well, or plug and abandon. Fill hole with mud and run logs to TD as directed.

22. If the well is drilled and at some depth a commercial production zone is encountered, prepare to run the slotted liner. A constant stream (30-40 GPM) of cold water must be kept running into the well to keep it quenched.

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7-5/8-INCH SLOTTED LINER

23. Run 7-5/8-inch, Grade L-80, 42.8 lbs/ft, Hydril SFJ threaded liner, as per Slotted Liner Prognosis on page 28. Equip liner with guide shoe, weld shoe solid and tack-weld first three joints. Use thread lock compound on first three collars. Hang liner 25 feet above bottom, leaving 4 blank joints below hanger.

24. Run into the hole with enough 3-1/2-inch drill pipe to clean and displace the mud inside of the hole. Trip up and down the hole until several hole volumes of water have been pumped.

25. Trip out laying down drill pipe. Install second valve on wellhead. Conduct three step injectivity test using rig's pumps and downhole pressure monitoring tools. Close valves and allow well to warm up for a minimum period of one month. Conduct temperature/pressure surveys during warm-up period to monitor well temperature recovery and obtain information on the location of the feed zones.

Drilling Fluid Program

1. Surface to 1,400'

Use gel, water (lime base) mud with additives as necessary for viscosity control for lifting cuttings. The following properties must be maintained:

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Mud Weight: 9.1 ppg or 68 #/cu. ft.
Viscosity: 40-45 secs.
API F.L.: 10+

2. 1,400' to 4,000' MD

Resinex may be needed to control fluid loss and act as a thinner as the temperatures increases. Use sufficient viscosity in mud to lift curings to keep the well bore clean and prevent large amounts of fill on connections. The following properties are requested.

YP - 5-10
API F.L. - 8-10 cc
Mud Weight: 9.0-9.5 ppg or 67-70#/cubic foot
Initial Gels (10 secs.) - 2-5#/100 sq. ft.

Well to be drilled with mud or foam below 9-5/8-inch casing (± 4,000 feet), where needed.

Install and operate a mud cleaner. Maintain a supply of lost circulation material on location such as cottonseed hulls and walnut hulls. Maintain a supply of weighting material (barite) on location in case needed for control of flow from well during drilling.

Use minimal amounts of non-chromium lignite, caustic soda and quebracho as needed to condition mud. Use soda ash and sodium bicarbonate for cement contamination.

3. 4,000' to 7,500' M.D.

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Mud or stiff-foam where necessary.

Drift Angle Pleasurement Program

1. Drift angle surveys shall be made within 100 ft of all casing set points and at T.D.

2. 0 to 1,400′ - every 500′ or closer and at bit changes to monitor changes in angle or direction.

3. 1,400 to 2,700′ - every 500′ if deviation is less than 3° or every 300′ if deviation is more than 3°.

4. 4,000′ to TD - every 100 feet if a slick assembly is chosen every 500′ for a packed hole assembly.

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CASING AND CEMENTING PROGNOSIS

FOR 1 STAGE CEMENT JOB ON 1,400 FT. 20" STRING/LINER

1. Well description: Puna Well No. _____

2. This prognosis is based on using a 9.5 ± 0.2 ppg mud and setting casing @ 1,400 feet and/or - feet into/below surface.

3. If on reaching casing point the above conditions do not apply, or if other well circumstances make using this prognosis inadvisable, the drilling operations supervisor is to review the matter with supervision. Field personnel are encouraged to review prognosis with cementing company as early as practical.

4. Casing Program: Casing size 20". Casing to be run 1'-3' above T.D.

   Make up, etc. allowance ___ ft. of ___ lbs/ft.

   Surface to 1,400 ft.

   Total length: 1,400 ft. of 106 lbs/ft., K-55, BTC Casing

Maximum Allowable Stresses

Tension (lbs)	Collapse (psi)	Burst (psi)
1,683,000	770	2,320

Safety Factors

3.46	1.31	1.94

(No buoyancy contemplated)

Casing weight in 9.5 ppg mud: 126,800 lbs.

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5. Casing Hardware:
Float shoe type: Weld on Guide Shoe
Float collar 1 joint(s) above shoe
Float Collar type: insert valve
Centralizers: one at and above shoe. Also, every 90 ft. (every third joint above float collar).

Estimated number of centralizers: 16. (Locate over collars.)
Scratchers every - ft. to cover - from - ft. to - ft.
DV tool located @ - ft. Type: -.
Other equipment: Pipe lock bottom two joints.

6. Preflush Water Volume: 300 cu.ft.
Other Type: Light cement preflush
Volume: 300 cu.ft.

7. Cement and Cement Volume:

First stage: Type: Class G + 3% $CaCl_2$.
Slurry weight: 16.4 ppg. Slurry yield: 1.06 ft^3/sack.
Thickening Time: 1 hr Retard for ___ hours pumpability
@ ___°F (BHST).
X Accelerate for 16 hours WOC time.
___ Not critical.

Friction reducer: X Establish turbulent flow @ ____ bbls/min.
___ Not critical.

Volume: Base on caliper log/experience and use sufficient to:
__ Cover _____ formation plus _____ ft.
X Circulate to surface.
__ Reach _____ ft.
Minimum volume 3,970 sacks, based on 26" hole;
+100% excess = 4,215 ft^3

Water requirement: 4.3 gal/sk

Total volume of water: 2,280 ft^3

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Casing Running and Cementing Operation:

The following special instructions are in force:

8. Reciprocation:
   _X_ Do not reciprocate.
   ___ Reciprocate until just prior to bumping plug. Do not exceed
   _____ lbs. additional tension from drag and cement weight.

9. Displacement:
   Displacement cement with mud @ less than 30 cu. ft./min. (plug flow).
   Rate may be exceeded while "chasing" cement. Do not exceed 400 psi while displacing and do not exceed 750 psi when bumping plug.

10. Temperature Survey:
   _X_ Run temperature survey at casing depth in any event.
   ___ Run temperature survey if LC experienced.
   ___ Do not run temperature survey.

11. Wellhead Equipment Requirements:
   Description: CSG head for 20" Hydrill (2,000 psi)

12. Special Notes: Monitor returns and maintain cement level in annular space (top job).

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CASING AND CEMENTING PROGNOSIS

FOR 1 STAGE CEMENT JOB ON 2,700 FT. 13-3/8" Intermediate STRING/LINER

1. Well description: Puna Well No. _____

2. This prognosis is based on using a 9.5 ± 0.2 ppg mud and setting casing @ 2,700 feet and/or - feet into/below surface.

3. If on reaching casing point the above conditions do not apply, or if other well circumstances make using this prognosis inadvisable, the drilling operations supervisor is to review the matter with supervision. Field personnel are encouraged to review prognosis with cementing company as early as practical.

4. Casing Program: Casing size 13-3/8". Casing to be run 1'-3' above T.D.

   Make up, etc. allowance ___ ft. of 68 lbs/ft.
   Surface to 2,700 ft.
   Total length: 2,700 ft. of 68 lbs/ft., L 80 - VAM Conn. (Gauge joints)

   Maximum Allowable Stresses

Tension (lbs)	Collapse (psi)	Burst (psi)
1,545,000	2,260	4,930

   Safety Factors

3.9	2.26	2.24

   (No buoyancy contemplated)

   Casing weight in 9.5 ppg mud: 156,800 lbs.

5. Casing Hardware:
   Float shoe type: Weld on Guide Shoe
   Float collar 1 joint(s) above shoe.
   Float Collar type: insert valve
   Centralizers: one above shoe and one on first collar. Also, every 90 ft. (every third joint above float collar).

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Estimated number of centralizers: 31. (Locate over collars.)
Scratchers every - ft. to cover - from - ft. to - ft.
DV tool located @ - ft. Type: -.
Other equipment: Pipe lock bottom three joints, use geothermal rated casing dope.

6. Preflush Water Volume: 200 cu.ft.
Other Type: Super Flush
Volume: 200 cu.ft.

7. Cement and Cement Volume:
- If lost circulation is a problem, change cement to spherelite blend as shown in note (12).

First stage: Type: Class "G" cement blended with Perlite 1:1 and 40% S.F. + 2% gel + 0.65% CFR-2, retard as needed
Slurry weight: 12.3 ppg. Slurry yield: 2.65 ft^3/sack.
Thickening Time: X Retard for 4 hours pumpability @ 350 °F (BHST).
___ Accelerate for _____ hours WOC time.
___ Not critical. _____ bbls/min.

Friction reducer: X Establish turbulent flow @ 30 cu. ft./min.
___ Not critical.

Volume: Base on caliper log/experience and use sufficient to:
___ Cover _____ formation plus _____ ft.
X Circulate to surface.
___ Reach _____ ft.
Minimum volume 1,740 sacks, based on 17-1/2" hole and 100% excess = 4,613 ft^3
Water requirement: 12.1 gal/sk
Total volume of water: 2,814 ft^3

Tail Cement: Follow with a tail volume, enough to cover bottom 200 feet of casing
Type: Class "G" cement blended with 40% silica flour and 0.65% CFR-2
Slurry weight: 15.5 ppg. Slurry yield: 1.62 ft^3/sk
Volume: Minimum volume: 164 ft^3 or 101 sacks
Water requirement: 6.8 gal/sk
Total volume of water: 90 ft^3

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Casing Running and Cementing Operation:

The following special instructions are in force:

8. Reciprocation:
   X Do not reciprocate.
   ___ Reciprocate until just prior to bumping plug. Do not exceed
   _____ lbs. additional tension from drag and cement weight.

9. Displacement:
   Displace cement with water @ 10 bbls/min. (plug flow).
   Rate may be exceeded while "chasing" cement. Do not exceed
   1,000 psi while displacing and do not exceed 1,500 psi when bumping plug.

10. Temperature Survey:
   X Run temperature survey before setting casing in any event.
   ___ Run temperature survey if LC experienced.
   ___ Do not run temperature survey.

11. Wellhead Equipment Requirements:
   Description: Use continuous circulation head loaded with top plug.

12. Special Notes: (1) If lost circulation becomes a problem, spherelite cement should be blended as follows: Class "G" cement blended with 40% silica flour, 50 lbs. per sack of cement of spherelite, 4% gel, 5% lime, 1.25% CFR-2 and 0.5% Halad-22A; cement should be mixed at 82.2#/cft (11 ppg); slurry yield is 3.21 cu.ft./sack; mixing water requirements are 1.50 cu.ft./sack (11.22 gal/sack).
   (2) Monitor returns and maintain cement level in annular space.

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CASING AND CEMENTING PROGNOSIS

FOR 1 STAGE CEMENT JOB ON 4,000 FT. 9-5/8" STRING/LINER

1. Well description: Puna Well No. _____

2. This prognosis is based on using a 9.5 ± 0.2 ppg mud and setting casing @ 4,000 feet and/or - feet into/below _____.

3. If on reaching casing point the above conditions do not apply, or if other well circumstances make using this prognosis inadvisable, the drilling operations supervisor is to review the matter with supervision. Field personnel are encouraged to review prognosis with cementing company as early as practical.

4. Casing Program: Casing size 9-5/8". Casing to be run 1'-3' above T.D.

   Make up, etc. allowance: 40 ft. of 47 lbs/ft.
   Surface to 4,000 ft.
   Total length: 4,040 ft. of 47 lbs/ft., C-90 - VAM Conn. (Gauge joints)

   Maximum Allowable Stresses

Tension (lbs)	Collapse (psi)	Burst (psi)
1,210,000	4,990	7,720

   Safety Factors

3.19	3.35	2.4

   Casing weight in 9.5 ppg mud: 162,250 lbs.

5. Casing Hardware:
   Float shoe type: Halliburton Super Seal _____.
   Float collar 1 joint(s) above shoe.
   Float Collar type: Halliburton Super Seal _____.
   Centralizers: one above shoe and one on first collar. Also, every 90 ft. (every third joint above float collar).

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Estimated number of centralizers: 45. (Locate over collars.)
Scratchers every - ft. to cover - from - ft. to - ft.
DV tool located @ - ft. Type: -.
Other equipment: (1) Pipe lock bottom three joints, use geothermal rated casing dope. (2) Use two-stage cemneting collar.

6. Preflush Water Volume: 400 cu.ft.
Other Type: Super Flush
Volume: 200 cu.ft.

7. Cement and Cement Volume:
- If lost circulation is a problem, change cement to spherelite blend as shown in note (12).

Single stage: (volumes assume one stage cementing job)
Type: Class "G" cement blended with Perlite 1:1 and 40% S.F. + 2% gel + 0.65% CFR-2, retard as needed.

Slurry weight: 12.3 ppg. Slurry yield: 2.65 ft^3/sack.
Thickening Time: X Retard for 4 hours pumpability @ 350 °F (BHST).
___ Accelerate for _____ hours WOC time.
___ Not critical. _____ bbls/min.

Friction reducer: X Establish turbulent flow @ 30 cu. ft./min.
___ Not critical.

Volume: Base on caliper log/experience and use sufficient to:
___ Cover _____ formation plus _____ ft.
X Circulate to surface.
___ Reach _____ ft.
Minimum volume 1,240 sacks, based on 12-1/4" hole and 100% excess = 3,288 ft^3

Water requirement: 12.1 gal/sk
Total volume of water: 2,000 ft^3

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Second stage (to be used only if needed); please see note (3).

(Volumes assume stage cementing collar located at +2,000 ft.):

Type: Class "G" + 40% S.F. + 0.4% HR-7 + 0.65% CFR-2.

Slurry weight: 15.5 ppg. Slurry yield: 1.62 ft^3/sack.
Thickening Time: X Retard for 4 hours pumpability
@ 350 °F (BHST).
___ Accelerate for _____ hours WOC time.
___ Not critical. _____ bbls/min.

Friction reducer: X Establish turbulent flow @ ____ bbls/min.
___ Not critical.

Volume: Base on caliper log/experience and use sufficient to:
___ Cover _____ formation plus _____ ft.
X Circulate to surface.
___ Reach _____ ft.
Minimum volume 1,012 sacks, based on 12-1/4" hole and 9-5/8" casing + 100% excess = 1,640 ft^3

Water requirement: 6.8 gal/sk
Total volume of water: 920 ft^3

Casing Running and Cementing Operation:

The following special instructions are in force:

8. Reciprocation:
X Do not reciprocate.
___ Reciprocate until just prior to bumping plug. Do not exceed
_____ lbs. additional tension from drag and cement weight.

9. Displacement:
Displace cement with water @ 10 bbls/min. (Laminar flow).
Rate may be exceeded while "chasing" cement. Do not exceed
1,000 psi while displacing and do not exceed 1,500 psi when bumping plug.

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10. Temperature Survey:
   _X_ Run temperature survey in any event before setting casing.
   ___ Run temperature survey if LC experienced.
   ___ Do not run temperature survey.

11. Wellhead Equipment Requirements:
   Description: Use continuous circulation head loaded with top plug.

12. Special Notes: (1) If lost circulation becomes a problem, spherelite cement should be blended as follows: Class "G" cement blended with 40% silica flour, 50 lbs. per sack of cement of spherelite, 4% gel, 5% lime, 1.25% CFR-2 and 0.5% Halad-22A; cement should be mixed at 82.2#/cft (11 ppg); slurry yield is 3.21 cu.ft./sack; mixing water requirements are 1.50 cu.ft./sack (11.22 gal/sack).

(2) Monitor returns and maintain cement level in annular space.

(3) Use of a two-stage cementing collar will be decided depending upon the geological conditions encountered and the depth at which the casing will be cemented.

(4) If two-stage cementing is decided on, volume of the first stage may be calculated by simple subtraction of the volume for the second stage from the one for the single stage.

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SLOTTED LINER PROGNOSIS

FOR LINER HANGING AT 3,900 FT STRING/LINER

1. Well description: Puna Well No. _____

2. This prognosis is based on using water and setting liner @ 3,900 feet and/or 100 feet into/below 9-5/8" casing.

3. If on reaching casing point the above conditions do not apply, or if other well circumstances make using this prognosis inadvisable, the drilling operations supervisor is to review the matter with supervision.

4. Liner Program:
   Liner size 7-5/8".
   Liner to be run 25' above T.D.

   Make up, etc., allowance: 40 ft. of 42.8 lbs/ft.
   Total Length: 3,900 feet to 7,475 ft.: 3,615 ft. of 42.8 lbs/ft.
   L-80 Hydril SFJC

   Maximum Allowable Stress

   Tension: 998,000 lbs.

   Safety Factor

   6.5

   Liner wt. in water: 132,200 lbs.

5. Casing Hardware: Float shoe type: Guide shoe (bullnose) _____.
   Other equipment: Pipe lock bottom joint.

6. Slotting: 2-1/2 x 1/4-inch slots, 18 rows of slots around the casing, 36 slots per foot.

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CASING PROGRAM

SIZE	INTERVAL (TVD)	LENGTH	DESCRIPTION	MAXIMUM ALLOWABLE STRESSES (SAFETY FACTOR) TENSION (lbs x 1,000)	COLLAPSE (psi)	BURST (psi)
20"	SURF-1,400'	1,400'	106#/ft K-55 BTC	1,683 (3.4)	770 (1.3)	2,320 (1.94)
13-3/8"	SURF-2,700'	2,700'	68#/ft L-80 VAM	1,545 (3.9)	2,260 (2.3)	4,930 (2.2)
9-5/8"	SURF-4,000'	4,040'	47#/ft C-90 VAM	1,210 (3.1)	4,990 (3.4)	7,720 (2.4)
7-5/8" (Liner)	3,900-TD	3,615'	42.8#/ft L-80 Hydr. SFJC	998 (6.5)	--	--

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DRILLING NOTES

1. Take drift shots as directed and/or at bit change trips. If angle persists above 5°, except in a planned directional hole, run a multi-shot survey at T.D.

2. Take maximum reading thermometer bottom-hole temperature and drift shot at bit changes.

3. Take continuous temperature profiles before setting casing strings.

4. Hold BOP practice drills once a week, each crew.

5. Check BOP closing system each trip.

6. Have flow control valve on rig floor to fit any pipe in the hole.

7. Run drill string float always.

8. Have water lines available to spray and cool well head equipment.

9. Use only high temperature rubber elements.

10. Keep mud pumps hooked up and ready when drilling with air.

11. Keep float spare on rig floor.

12. Install Geyser's type muffler-atmospheric separator system when drilling with air (see figure 7). Alternatively, construct and use rock muffler when lithology and State permits allow.

13. Install mud cooling system when needed.

14. Maintain pit level indicator with alarm.

15. When drilling with mud, wipe hole every 6-8 hours of drilling. Log string load each tour (up, down, rotating). Log 30 SPM pump pressure each tour.

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MINIMUM RIG SPECIFICATIONS

DRAWWORKS	Diesel or diesel electric, 500 HP. Rated for 8,000' with 4-1/2" drillpipe.
MAST	Triple. Rated for 550,000 pounds, gross nominal capacity. 450,000 pounds, hook load with 8 lines.
MUD PUMPS	Main pump, 500 HP. Tail driven or independent drive. 2nd pump, 500 HP, independent drive.
LIGHT PLANT	100 KW available.
BLOCKS, ETC.	Rated 220 ton.
TABLE	27-1/2"
CIRC. SYSTEM	Two shakers, 500 bbl. system with 500 bbl. storage.
SUB BASE	22'
DRILL PIPE	7,000', 4-1/2", 16.6#, grade E
DRILL COLLARS	2 - 10"; 12 - 6"
WATER STORAGE	2,000 bbls.
SAND LINE	7,000'

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GENERAL SPECIFICATIONS

Pipe and BOP Inspection

The initial acceptance of drill pipe should be based on an AAODC-API Class II specification inspection. All subsequent inspections should discard pipe with 30% wear or greater; i.e. use 30% where Class II states 20%.

The drill pipe inspection should include:

1. Electromagnetic inspection of tubes (Sonoscope or Scanalong).
2. Wall thickness and cross-sectional area (ultrasonic or gamma ray).
3. End area inspection (electronic or magnetic particle).
4. Tool joint O.D. caliper 5-1/4-inch min. O.D. for 4-1/2-inch XH, whichever comes first.

All drill collar end area should be magnetic particle inspected every 14 days. Every 9 days in steam.

All BOPs should be inspected for wear by the manufacturer prior to installation. All BOPs should be tested after installation prior to drilling out cement, and should be worked daily.

Remind service companies furnishing bottom-hole assemblies that their equipment should be Magna-fluxed prior to delivery.

Auxiliary Equipment

1. Five pen drilling recorder with: (a) weight, (b) rotary speed, (c) torque, (d) rate of penetration, (e) inlet pump pressure.
2. Pit level indicators and pump stroke counters.
3. Use square kelly with above (see Pipe and BOP Inspection).
4. Use tong torque assembly for making up collars.

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FIGURES

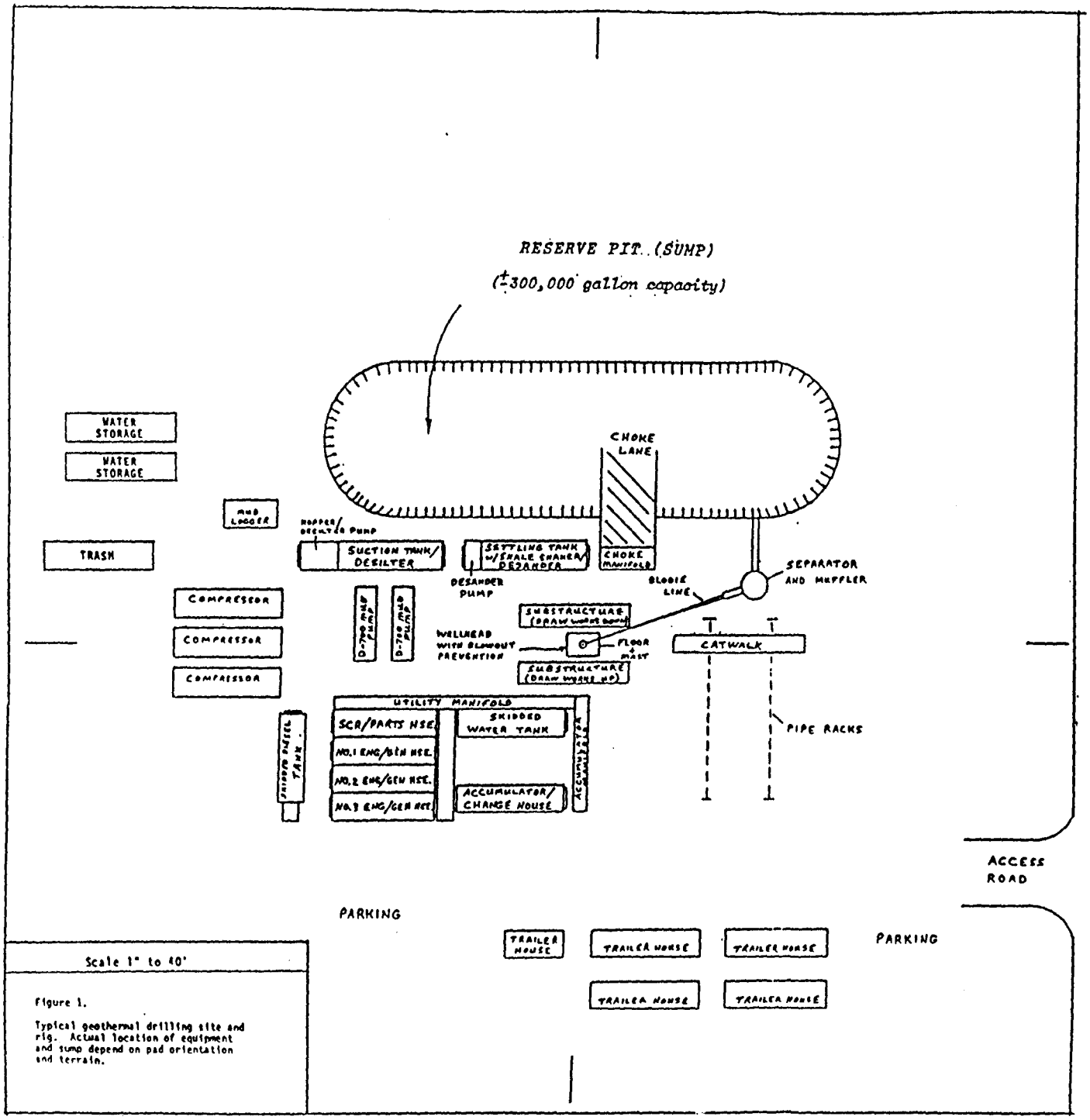

Figure 1.

Typical geothermal drilling site and rig. Actual location of equipment and sump depend on pad orientation and terrain.

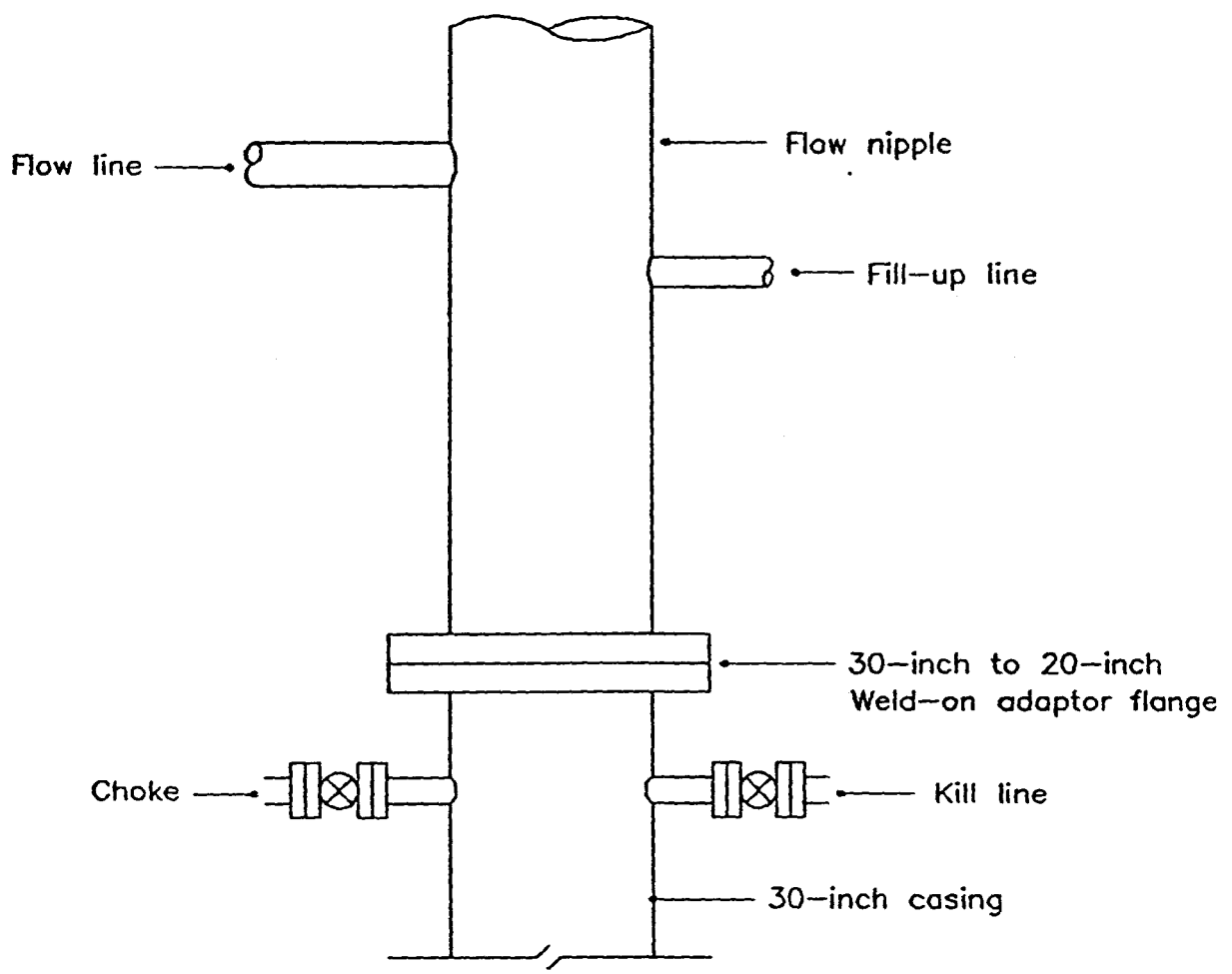

Figure 2: BOP for use on 30-inch casing string, mud drilling to ±300'.

E:\PUNA2/022190/H2436

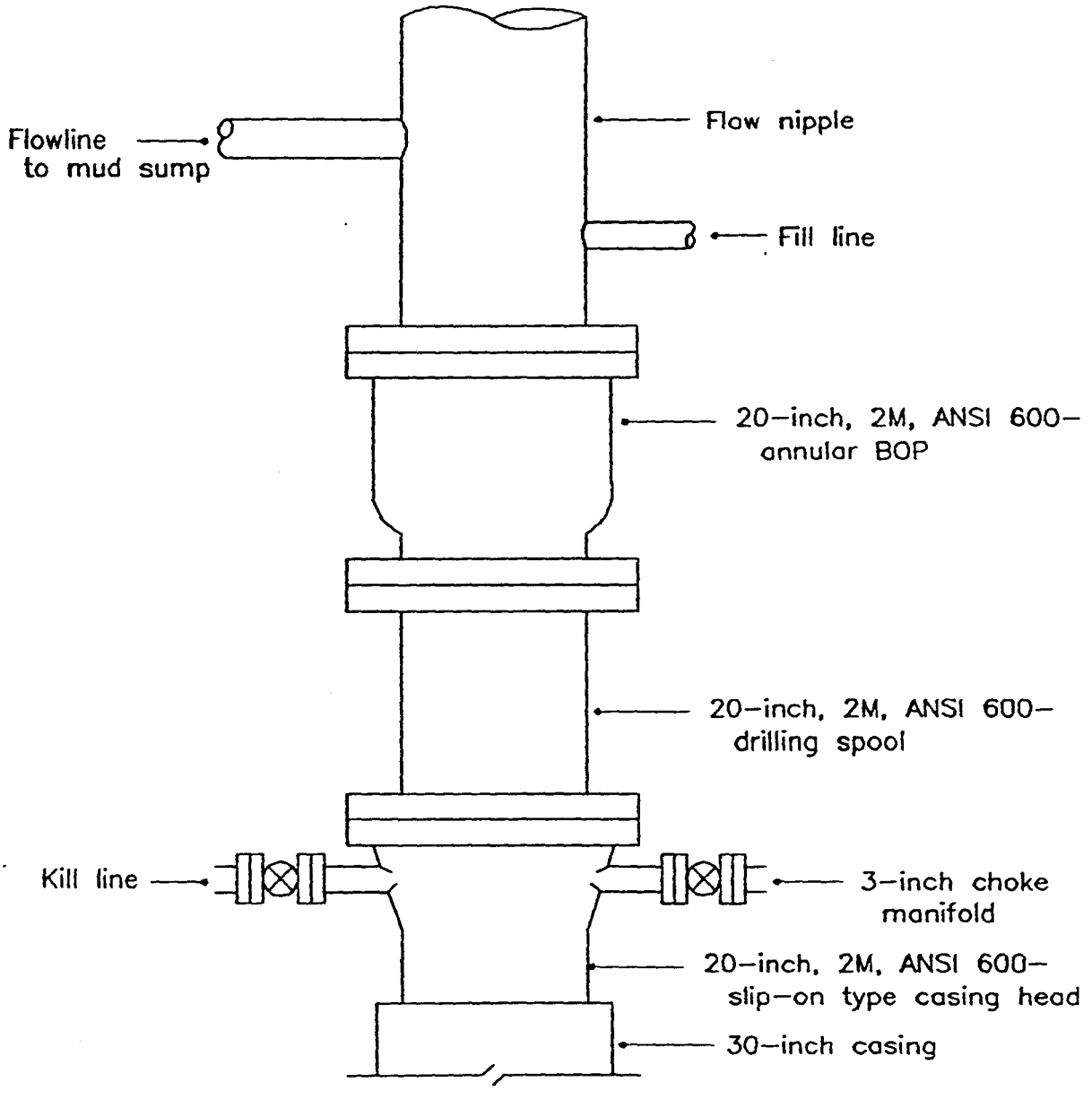

Figure 3: BOP for use on 20–inch casing string, mud drilling below ±1,400'.

EWPUNA3/022190/H2436

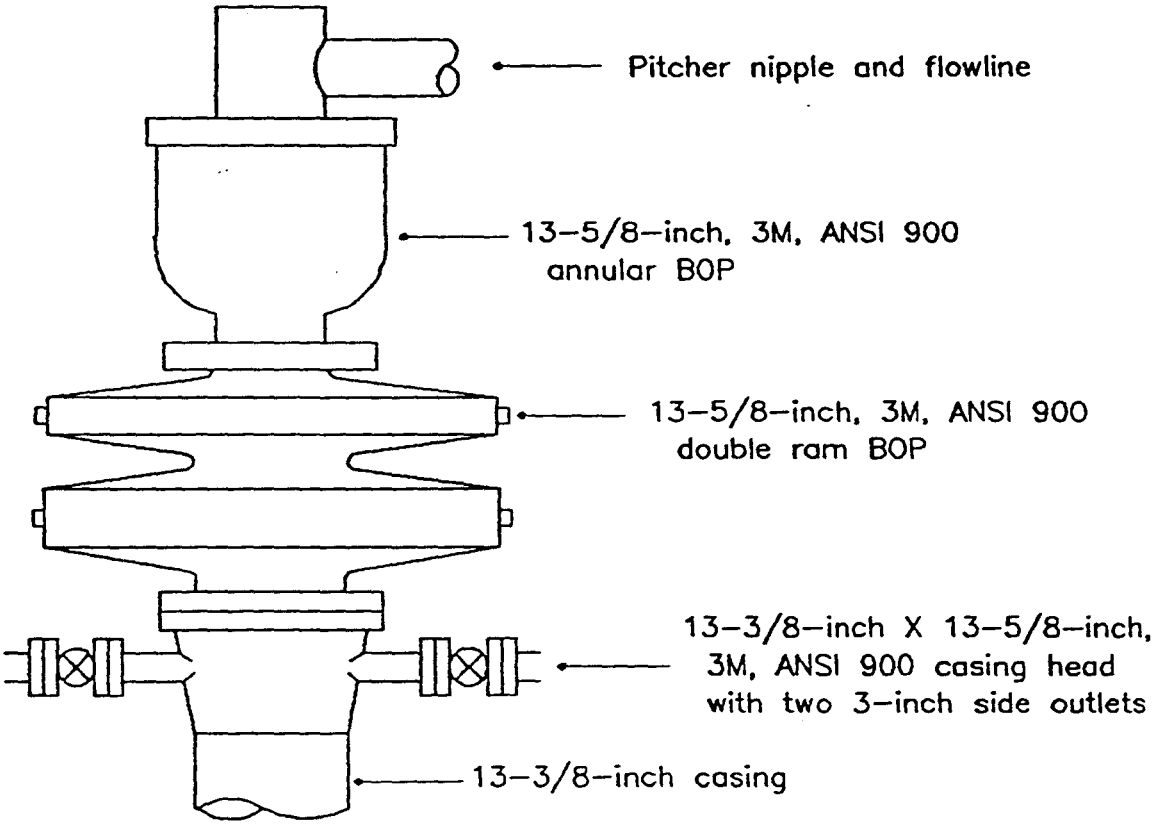

Figure 4: BOP for use on 13–3/8–inch casing string – mud drilling below 2,700'.

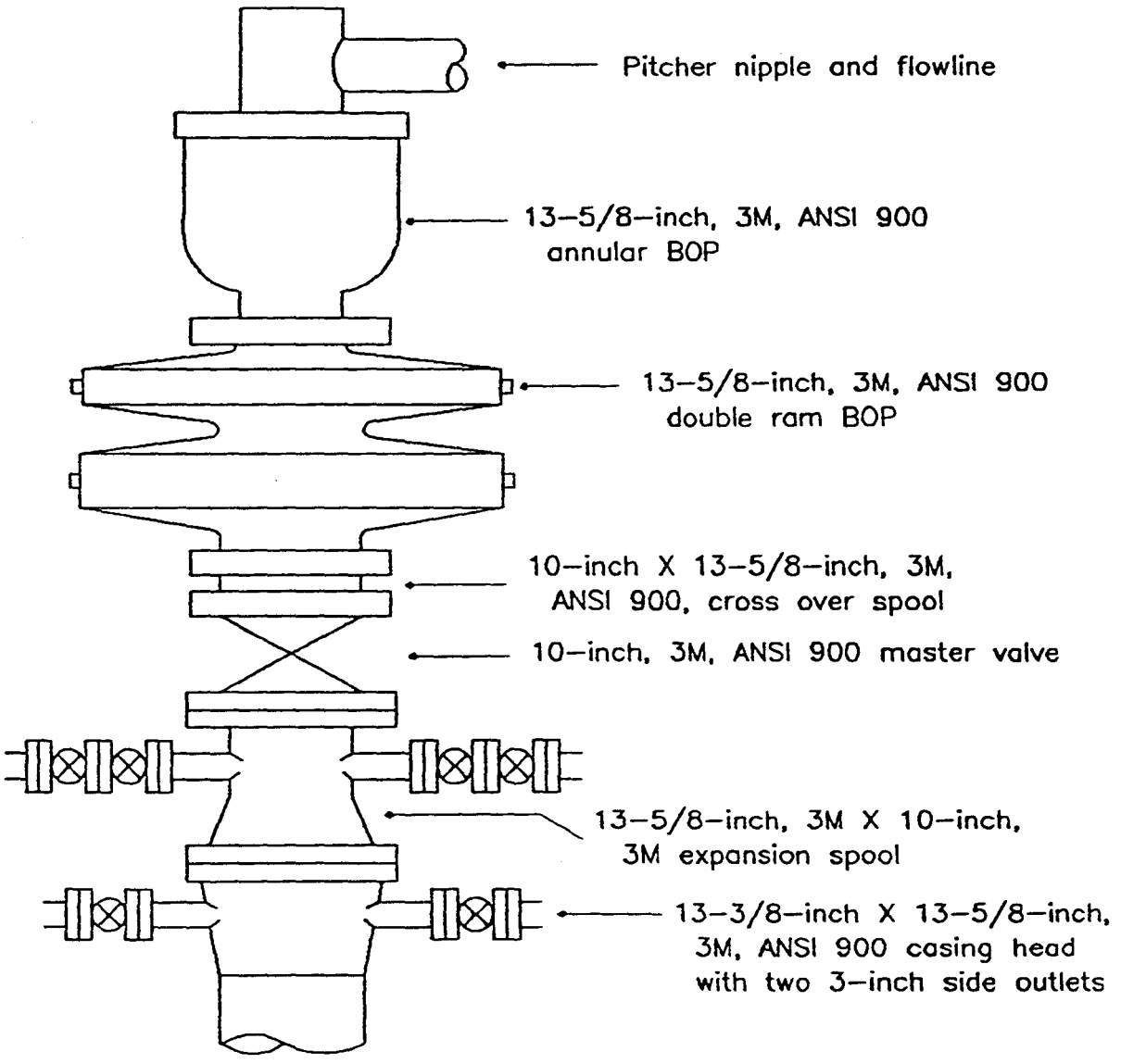

Figure 5: BOP for use on 13–3/8–inch casing string – mud drilling below 4,000'.

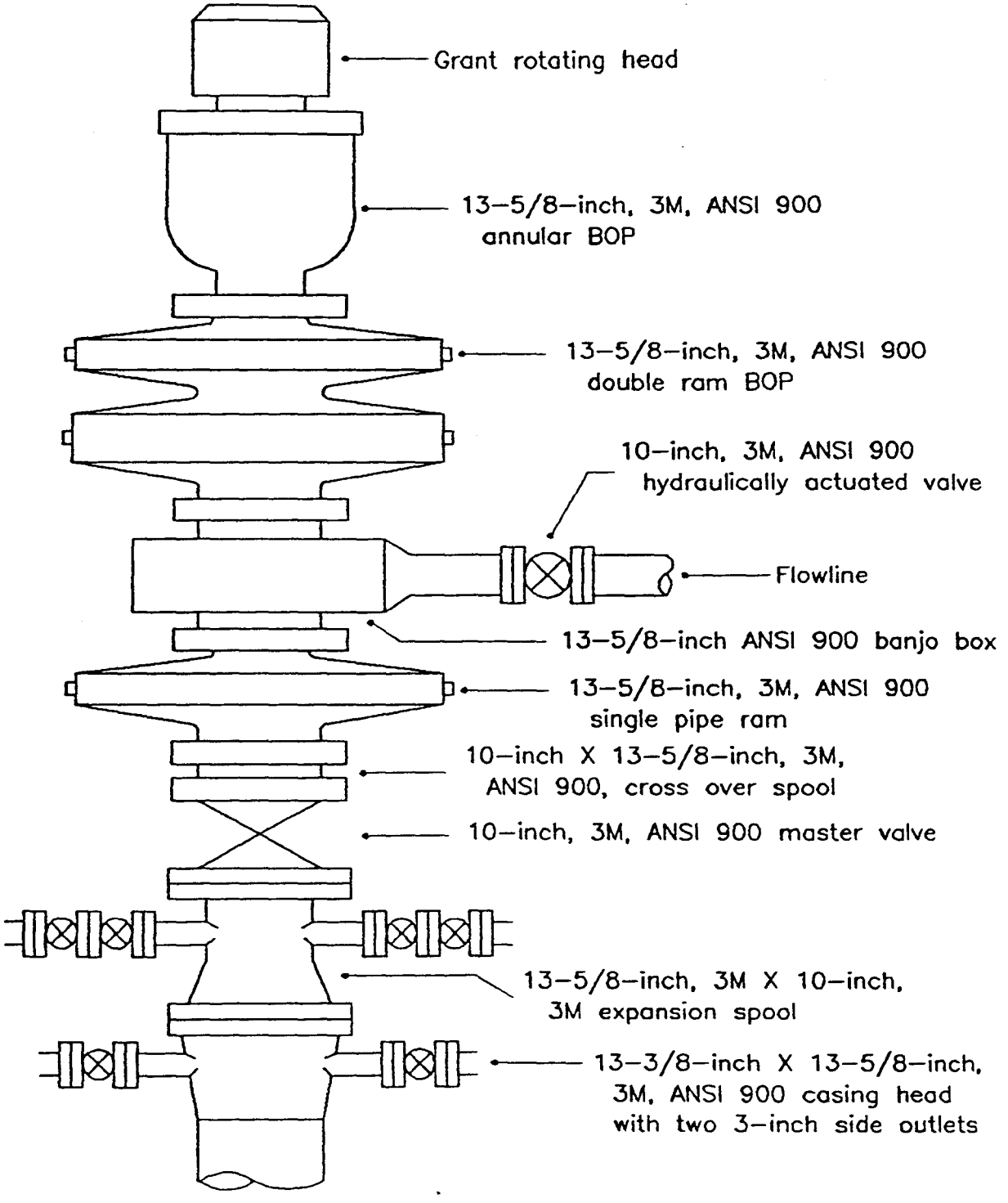

Figure 6: BOP for use on 13–3/8–inch casing string – air drilling below 4,000'.

FIGURE 7.

DRILLING WORKSHEET

TITLE: PUNA K.G.R.A.

WELLS:

LOCATION:

OBJECTIVE: Drill a water-steam producer to 7,500'

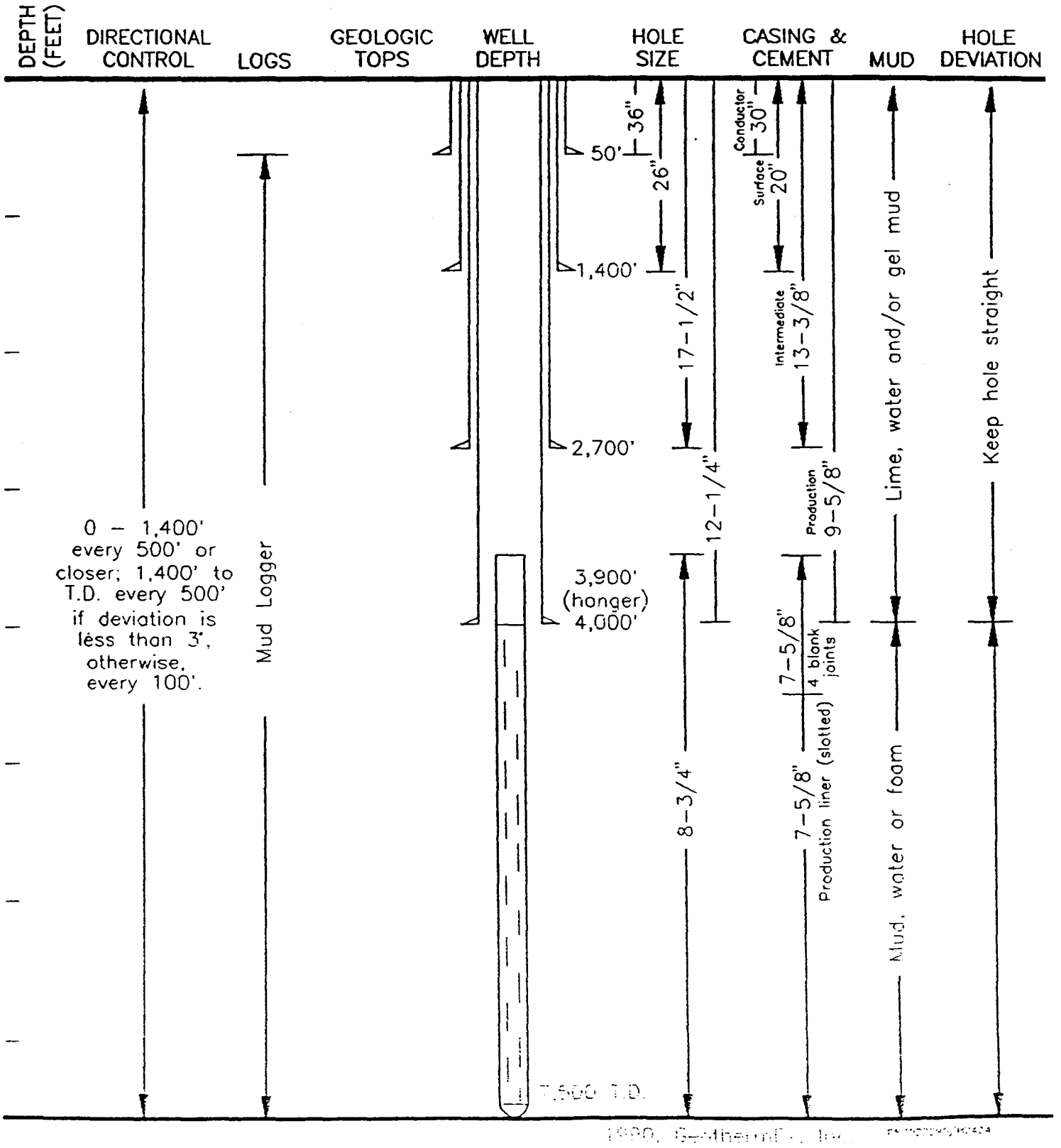

FIGURE 8, SILENCER-MUFFLER TO BE FURNISHED WITH SUBSEQUENT DRAFT.

EXHIBIT "D"

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PUNA WELL TESTING PROGRAM

OBJECTIVE: The objective of the three week production test is to determine the well productivity, enthalpy and chemical nature of the fluids produced by the well.

The following reservoir characteristics will be determined from the test:

- The location and nature of the main feed zones.
- The downhole temperature and pressure characteristics of the well.
- The near-wellbore hydraulic parameters (skin, flow capacity).
- The enthalpy of the produced fluids.
- The chemistry of the produced fluids.
- The initial power potential of the well.

TEST DESCRIPTION:

The test program will be implemented after the well has completed its warm-up period. It is recommended that immediately after drilling has been completed, a short-injection/pressure falloff test (lasting less than 1 day), using the rig pumps, be conducted. The data obtained from this short test will be compared with the results of the long-term flow test.

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The flow test will be run at one single rate for a period of time long enough to allow the well to reach near-stable conditions. A period of about three weeks of flow time has been recommended. Flow parameters will be monitored manually or automatically recorded on an hourly basis. The flow will be diverted from the well through a horizontal flow line equipped with sampling and metering ports, and a James tube. The fluid will be directed to an atmospheric muffler/separator; the liquid phase will be diverted and measured by means of a weir box, and the steam will be collected and chemically treated to abate the H_2S prior to its venting into the atmosphere.

Chemical samples of both gases and liquid will be obtained, using a micro-separator, on a scheduled basis. Temperature/pressure/spinner surveys using mechanical tools will be run at static conditions prior to initiating the flow, and under flowing conditions during the flow period. At the end of the test, a pressure build up survey will be run when the well is shut-in.

TEST PROCEDURE:

1. While the well heats up after drilling, temperature and pressure surveys should be conducted to obtain information on the well feed zones and their temperature. A small bleed should be initiated through one of the side valves of the expansion spool a few days before the well is discharged, to heat up the casing.

2. Install the flow line equipment, instrumentation and abatement system. Install a blind flange at the end of the flow test facility and test hydrostatically to 300 psi.

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3. Open the well vertically for cleanout, and flow through a 6-inch discharge pipe for a short period of time (not to exceed two hours). Monitor wellhead pressure and discharge lip pressure.

4. Divert the discharge to the separator and start operation of the abatement system. Open well to full flow. Monitor on an hourly basis the following parameters: wellhead pressure, wellhead temperature, flow line pressure and temperature, pressure differential across the orifice, discharge lip pressure and weir box level.

5. Collect steam/water/gas samples on the first and second days and every other day thereafter, or as specified by the testing engineer.

6. Run flowing temperature/pressure/spinner surveys at least two times spaced throughout the test. Conditions encountered during the test may indicate the requirement for extra runs.

7. At the end of the flowing period, run two pressure tools and one temperature tool in the well. Locate tools opposite the level of the most important fluid entry zone, determined from the previous flowing and static surveys. Shut the well in and monitor the pressure build up for a six hour period. Retrieve the tools and have them interpreted at the site. Depending on the results of the first survey, a decision will be made on whether it is necessary to run a second set of tools for another period of 6 hours.

8. Run static pressure/temperature/spinner surveys at 2 and 5 days after shut-in, and as needed thereafter.

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REPORTING:

The test data will be transmitted to GeothermEx's home office for inspection and quality assurance on a daily basis. Changes to the test program will be introduced as needed. A test report will be submitted, including a comprehensive description of the test activities and data collected, and the interpretation of the results.

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Short Term Production Testing
Equipment Specifications and Cost Estimates

Project: Barnwell - Production Well Testing
Attn: Dr. Martin Jokl
Date: January 15, 1990

1. Flow Rate Metering System

A. Piping: 10-inch diameter, schedule 40 flow line, equipped with ANSI-300 flanged connections and a 10-inch ANSI-600 gate valve. The flow line to be fabricated by Barnwell according to specifications, including metering/sampling ports and 3 James Tube diameters [1].

$12,000.00

B. Atmospheric Separator/Muffler: Fabricated by Barnwell according to specifications, of 1/2-inch thick rolled steel plate. The separator shall be designed for a working pressure of 15 psig for a well of 5 MW maximum size [1].

$8,000.00

C. Weir Box: Fabricated by Barnwell according to specifications, of 1/4-inch steel plate [1].

$5,000.00

Sub Total, metering system $25,000.00

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2. Flow Metering Instrumentation

A. Pressure Metering

5 inch dial pressure gauges procured by GeothermEx, equipped with diaphragm sealed sensor system. Ranges: 0-50 (2 units), 0-200 (3 units), 0-600 (2 units) (1).

$2,500.00

B. Differential Pressure Metering

2 pen differential and static pressure recorder procured by GeothermEx, equipped with liquid filled (bellows) sealed sensor system (1 unit) (1).

$2,000.00

C. Temperature Metering

Temperature indicating transmitter procured by GeothermEx, with type "J" thermocouple (0-600°F) for field mounting configuration (3 units) (1).

$750.00

D. Orifice Plates

10-inch paddle type orifice plates procured by GeothermEx, 1/8 inch thick SS-316 with calculations for 0-680 inches W.C., 40% steam, 80% brine (3 units) (1).

$700.00

Sub Total, Instrumentation $5,950.00

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3. Chemical Sampling

A.	Mini-separator, rental from GeothermEx, $100/day.	$3,000.00
B.	Sampling flasks, reagents, vials, laboratory analyses.	$4,000.00
	Sub Total, Geochemistry	$7,000.00

4. Downhole Metering System:

Option I: Purchase Equipment (Kuster Tools)

A. High temperature: downhole temperature pressure gauges and KPG type recorder (2 of each type); high performance 6 hour clocks (2 extra), sinker bars, KTG & KPG spare parts, repair kits, ultrasonic cleaning kit, field chart reader [1]. $21,500.00

B. Wireline Mechanical Hoist
Barnwell may use either option of stainless wireline per cost, or own 1/2-inch sand line hoist). $11,700.00

Option I, Sub Total, Pressure metering $33,200.00

Option II: Equipment rental and wireline logging services

Contract logging services as needed from Pruett or alternative:

A. Skid Hoisting Unit (each 30 days on location) $1,000.00

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B.	Instrument charges, @ $500/run, 6 runs	$3,000.00
C.	Labor @ $300/day (excluding per Diem and Travel)	$3,000.00
D.	Transportation (Equipment only)	$6,000.00
E.	Travel, personnel	$1,500.00
F.	Expenses, personnel @ $100/day/person	$1,000.00
	Option II, Sub Total, Pressure metering	$15,500.00

5. Professional Services, GeothermEx, Inc.[2]

A.	Well Test Engineer: preparation, field services, report preparation (55 days @ $520)	$28,600.00
B.	Geochemist: preparation, field service, reporting (15 days @ $520)	$7,800.00
C.	Travel: 3 trips @ $500/round trip	$1,500.00
D.	Subsistence: Hotel, meals, car rental 40 days @ $125.00	$5,000.00
E.	Communications: shipping, reproduction, etc.	$1,000.00
F.	Secretarial services: 10 days @ $300/day	$3,000.00
	Sub Total, Professional Services	$46,900.00

6. H_2S Abatement System

Contract abatement services as needed:

A.	Abatement Unit (30 days on location, transportation included)	$27,000.00

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B.	Manpower (two men, excluding per Diem and Travel Costs)	$4,000.00
C.	Travel	$1,000.00
D.	Expenses	$6,000.00
E.	Chemicals (21 days x $2,500/day, transportation included)	$52,500.00
	Sub Total, Abatement	$90,500.00

Total Costs, Flow Test

Expense Item	Option A	Option B
1. Flow Metering System	25,000	25,000
2. Flow Metering Instrum.	5,950	5,950
3. Geochemical System	7,000	7,000
4. Downhole Metering:		
Purchase	33,200	-
Rent	-	15,500
5. Professional services	46,900	46,900
6. H_2S Abatement System	90,500	90,500
Total	208,550	190,850

Notes: (1) These items are also used during a long-term test. The atmospheric separator/muffler used during the short-term test helps to determine the engineering design of the pressure separator. The atmospheric separator/muffler will also be required during a long-term test that uses a pressure separator. Fluids

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leaving the pressure separator still contain some steam; also, for confirmation by James tube - weir box measurements the atmospheric separator is required.

(2) Costs for GeothermEx assume that Barnwell dedicates the full time of Dr. M. Jokl during the field tests. If this is not a correct assumption, then add:

A.	Assistant Test Engineer: field services, report preparation, 35 days @ $400	$14,000.00
B.	Travel	$500.00
C.	Subsistence: 30 days @ $100.00	$3,000.00
	Sub Total	$17,500.00

MJ
C.J.C.

EXHIBIT "E"

DRILLING AGREEMENT

THIS AGREEMENT dated as of this _____ day of _____, 19__, by and between WATER RESOURCES INTERNATIONAL, INC., a Delaware corporation ("WRI") and MORGAN OIL, LTD., a Kentucky corporation ("MOL").

W I T N E S S E T H :

WHEREAS, MOL in its capacity as Operator under that certain Geothermal Development Agreement dated as of March 13, 1991, by and between MOL and Barnwell Geothermal Corporation, a Delaware corporation ("BGC") (the "Development Agreement") is developing certain geothermal properties in the Puna District, County of Hawaii and as a result MOL desires to drill a geothermal hole in furtherance of its obligations under the Development Agreement; and

WHEREAS, WRI, an affiliate of BGC, is a drilling contractor with operations within the County of Hawaii and in accordance with the Development Agreement desires to drill the hole currently required by MOL and MOL desires to engage WRI to drill said hole;

NOW THEREFORE, in consideration of the premises, the mutual covenants, rights and obligations contained herein, the benefits to be derived therefrom, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, MOL and WRI hereby agree as follows:

Section 1. Drilling Rig. In consideration of the payments set forth in Section 4 hereof, WRI shall provide, to MOL the drilling rig (the "Rig") and the associated tools and equipment specified in the Rig Specification Schedule attached hereto as Exhibit "A" and incorporated herein by reference for the drilling of a geothermal hole. Any equipment required to drill the hole not listed in Exhibit "A" shall be supplied by MOL.

Section 2. Drilling Crews. In further consideration of the amounts set forth in Section 4, WRI shall supply all drilling crews deemed reasonably necessary by WRI to operate the Rig. Any specialized personnel required to complete the hole, including but not limited to a drilling engineer, on-site geologist or logging technician shall be supplied by MOL, and not WRI.

Section 3. Drilling Operations. WRI shall be under no obligation to mobilize the Rig before August 1, 1991. Furthermore, MOL shall give WRI six (6) months notice to mobilize the Rig. Said notice will indicate when and where the drilling services to be provided hereunder are to commence and the expected schedule and date of completion of such drilling operations. MOL recognizes that WRI utilizes the Rig for other work and agrees, whenever possible, to work with WRI to schedule Rig usage in a way calculated to minimize the effect of the geothermal drilling contemplated by the Development Agreement and this Agreement on WRI's other uses of the Rig.

Section 4. Consideration. It is the parties' intent that WRI's consideration be determined with reference to actual costs incurred by WRI for labor and equipment as more particularly set forth in Section 4.1 hereof.

4.1 Standard Consideration. In consideration of the drilling services to be provided MOL by WRI hereunder, MOL shall pay WRI, WRI's actual costs plus twenty percent (20%), plus any and all applicable Hawaii general excise taxes. For purposes of this Agreement, "actual cost" shall mean the direct cost to WRI of providing the services and/or equipment to be provided hereunder plus a reasonable allocation of overhead. The overhead charge shall be determined at the time invoices are prepared pursuant to Section 7 hereof and said charge shall be 1.75 times WRI's direct costs. At MOL's request, WRI shall furnish an historical record of the wages paid its drilling crews covering a period six (6) months prior to commencement of the drilling to be undertaken hereunder. Actual costs for determining WRI's compensation hereunder shall include drilling crew wages not in excess of the average per person drilling crew wages paid during said preceding six month period.

4.2 Rig Repair Consideration. In the event it is necessary to shut down the Rig for repairs while the Rig is mobilized pursuant to this Agreement, excluding routine rig servicing, MOL shall pay WRI the consideration set forth in Section 4.1 hereof (based on

full drilling crew costs for standard operations) for each period during which the Rig is shut-down for repairs ("Rig Repair Time") up to a maximum of eight (8) hours for any one repair job and a total of twenty-four (24) hours for each thirty (30) day period. For Rig Repair Time in excess of the foregoing, MOL shall pay WRI fifty percent (50%) of the consideration set forth in Section 4.1 hereof for each period of Rig Repair Time up to a maximum of sixteen (16) hours for any one job and forty-eight (48) hours for any thirty (30) day period.

4.3 Standby Time Consideration. During those periods when the Rig is shut down (not due to repair in which case Section 4.2 shall apply), while mobilized at the drill site in readiness to commence or resume operations, but WRI is waiting on orders of MOL or on materials, services or other items to be furnished by MOL (Standby Time"), MOL shall pay WRI the consideration set forth in Section 4.1 hereof where actual costs are based on full drilling crew costs for standard operations.

4.4 Mobilization. For the purpose of computing the consideration to be paid WRI hereunder, the parties agree that the Rig shall be considered as mobilized from and demobilized to the WRI yard area located near Keaau, County of Hawaii.

4.5 Use of Crews During Standby or Shut-Down Time. WRI shall have the option, exercisable in its sole discretion, to use men from the drilling crews that would normally operate the Rig on other jobs during Standby Time or Rig Repair Time. If WRI elects to exercise such option, the charges to MOL pursuant to Sections 4.2 and 4.3 hereof shall be computed using labor actually assigned to the drilling, not based on the utilization of the full drilling crew. Thus, if WRI elects to exercise this option, the charges to MOL for Rig Repair Time or Standby Time shall decrease.

Section 5. Condition Precedent - Existence of the Rig. WRI and MOL agree that the drilling to be undertaken hereunder contemplates the use of the particular Rig described in Exhibit "A" attached hereto. In that regard, should the Rig be physically destroyed, or in the reasonable judgment of WRI damaged to the point of being unsuitable for the drilling to be undertaken hereunder, WRI shall be under no obligation to fulfill its obligations hereunder and this Agreement shall be of no further force and effect.

Section 6. Equipment Not Supplied by WRI. MOL may supply equipment needed for the drilling and not listed in Exhibit "A" in any manner it desires subject to the condition that the choice and utilization of such equipment shall not unreasonably interfere with WRI's performance of its duties hereunder. If MOL requests that WRI purchase, lease or rent any specific tools or equipment, drilling supplies and/or materials for the account of MOL, WRI will invoice MOL for such purchase, lease or rental at WRI's direct cost plus twenty-five percent (25%).

Section 7. Invoicing and Payment.

7.1 Invoicing. WRI will invoice MOL immediately after every two (2) weeks of drilling operations, or whenever the amount to be invoiced MOL exceeds $100,000.

7.2 Reimbursement. MOL shall remit payment for invoices received within two (2) weeks of receipt of such invoice.

7.3 Dispute Regarding Invoice. If MOL disagrees with the amount due on any invoice it will notify WRI of such disagreement within two (2) weeks of the receipt of such invoice. Such notice shall contain the amount MOL calculates to be the proper value of the invoice. MOL shall pay any portion of such invoice not in dispute within the two (2) week period specified in Paragraph 7.2. Within one (1) week of receipt of such notice, WRI shall either (1) submit a new invoice to MOL for the amount stated in the notice from MOL which shall be paid by MOL within three (3) days of receipt, or (2) the matter shall be submitted to Geothermex, Inc. for binding arbitration, the outcome of which the parties agree shall be final and nonappealable.

Section 8. Supervision of Drilling.

8.1 Overall Supervision. MOL shall provide a drilling engineer or other personnel with authority to determine all drilling procedures, including but not limited to (a) drilling fluid, (b) drill string, (c) bit configuration, (d) temperature logging, (e) directional surveys, (f) casing points, and (g) cementing. WRI and its officers, agents and employees, except as set forth below in Paragraph 8.2, shall follow the directions given by such supervising personnel of MOL.

8.2 Supervision of Crews. WRI shall supervise the routine activities of the drilling crews in accordance with the supervisory drilling guidelines given WRI by MOL pursuant to Section 8.1 hereinabove.

8.3 Other Services. WRI shall attempt whenever reasonably possible to provide services other than drilling services to be provided hereunder when requested by MOL. The price for these services shall be determined when requested by MOL.

Section 9. Insurance. WRI shall carry workman's compensation insurance in commercially reasonable amounts to the extent required by law and MOL shall obtain "blowout" insurance on the Rig, on commercial reasonable terms customary in the oil and gas or geothermal drilling industry, in an amount in no event to be less than the replacement value of the Rig.

Section 10. Indemnity. MOL is the party responsible for the drilling, and, with the exception of gross negligence or willful misconduct on the part of WRI, its officers, agents, or employees, will indemnify, hold harmless and defend WRI from any claims, disputes, damages, fines, fees, assessments or other liabilities resulting from, arising out of or relating to the drilling activities to be undertaken by WRI under this Agreement.

Section 11. Default; Event of Default. The default of either party hereto of any covenant to be observed or performed hereunder, if not cured within [ ] days after notice from the non-defaulting party hereunder, shall constitute an Event of Default for purposes of Section 12 hereof.

Section 12. Termination. This Agreement shall terminate on the first to occur of the following events:

a) An Event of Default shall have occurred and shall not have been waived by the non-defaulting party hereunder;

b) The drilling contemplated hereunder shall have been completed; or

c) Six (6) months shall have elapsed from the date the Rig is first mobilized pursuant to Section 3 hereof.

Section 13. Miscellaneous.

13.1 Assignment. Neither WRI or MOL shall assign their rights or delegate their duties under this Agreement without the prior written consent of the other party hereto.

13.2 No Third-Party Beneficiaries; Binding Nature. Nothing in this Agreement (express or implied) is intended or shall be construed to confer upon any person or entity not a party hereto any right, remedy, or claim under or by reason of this Agreement. This Agreement shall be binding upon and shall inure to the benefit of the parties hereto and their respective successors and assigns.

13.3 Entire Agreement. This Agreement constitutes the entire agreement between the parties hereto pertaining to the subject matter hereof and supersedes all prior and contemporaneous agreements and understandings of the parties in connection therewith.

13.4 Construction. In case any one or more of the covenants, agreements, or provisions hereof shall be invalid, illegal, or unenforceable in any respect, the validity of the remaining covenants, agreements, or provisions hereof shall be in no way affected, prejudiced, or disturbed thereby. This Agreement shall be governed by and construed in accordance with the laws of the State of Hawaii. WRI and MOL hereby submit themselves to the nonexclusive jurisdiction of the United States District Court for the District of Hawaii and the Circuit Courts of the First Circuit, State of Hawaii with respect to any matter arising out of this agreement or the transactions contemplated hereby.

13.5 Notices. All notices, consents, approvals, requests, demands, or other communications required or permitted to be given hereunder shall be in writing, shall be given by certified mail, return receipt requested, postage prepaid, or by prepaid telegram with confirmation of delivery obtained, and shall be deemed to have been duly five (5) days after transmittal of such notice to the address specified below:

If to Water Resources International, Inc.

Water Resources International, Inc.
2828 Paa Street, Suite 2085
Honolulu, Hawaii 96819
Attention: Mr. Martin L. Jokl

If to Morgan Oil, Ltd.

Morgan Oil, Ltd.
Route 6, Box 8
Manchester, Kentucky 40862
Attention: Mr. Charles L. Culton

Either party hereto shall have the right to change its address for notice hereunder form time to time to such other address within the United States of America as may hereafter be furnished in writing by such party pursuant to the terms of this Section 13.5.

13.6 Further Assurances. Each party hereto from time to time shall do and perform such further acts and execute and deliver such further instruments, assignments, and documents as may be required or reasonably requested by the other party to establish, maintain, or protect the respective rights and remedies of the parties and to carry out and effect the intentions and purpose of this Agreement.

13.7 Rights Cumulative. Subject to the provisions of Section 13.4, the rights and remedies granted hereunder shall not be exclusive rights and remedies but shall be in addition to all other rights and remedies available at law or in equity.

13.8 Amendment; Waiver. This Agreement may be modified or amended at any time, but only by a writing signed by all parties hereto. The failure of any party hereto to insist upon strict performance of any provision shall not constitute a waiver of, or estoppel against asserting, the right to require such performance in the future, nor shall a waiver or estoppel in any one instance constitute a waiver or estoppel with respect to a later breach of a similar nature or otherwise.

13.9 Internal References. Unless otherwise specified, all references in this Agreement to "Articles" and "Sections" are to Articles and Sections of this Agreement, and all references to "Exhibits" are to

Exhibits attached hereto, which are made parts hereof for all purposes.

13.10 Counterpart Execution. This Agreement may be executed in a number of counterparts, each of which shall have the force and effect of an original although constituting but one instrument for all purposes.

13.11 Additional Obligations. The parties hereto acknowledge that no party hereto may enter into any obligation binding on any other party, other than as provided for and contemplated in this Agreement, without first obtaining the consent of such other party.

13.12 Headings. Headings and titles herein are for the convenience of the parties hereto only, and shall in no way limit, define or otherwise affect the provisions hereof.

IN WITNESS WHEREOF, the undersigned parties hereto have executed this Agreement as of the date written first above.

WATER RESOURCES INTERNATIONAL, INC.

By _____
Its

MORGAN OIL, LTD.

By _____
Charles L. Culton
President

EXHIBIT A

RIG INVENTORY

1.	1 only	Portable Drilling Rig, Spencer Harris Model 7000 consisting of the following items:
1.1	1 each	Spencer Model 7000 Drawworks S/N 57
1.2	2 each	Model 16 Kelco Catheads with Controls
1.3	1 each	Spencer Model 7000 Gooseneck 3-Axle Trailer S/N 73
1.4	1 each	97'8" Spencer 4 1/2" T-1 Model 7000 Tubular Derrick S/N 102 with 1 each Spencer 5-Sheave Crown Block Grooved for 1-1/8" line, Crown Block Safety Platform with Guard Rails, Cat Line Sheave, Monkey Board, Tonque Line Rollers, Tonque Counter Balance Weights, 4 1/2 O.D. Stand Pipe. Mast Rated 250,000 lb. Hook Load with 6-Lines (2-1 Safety Factor)
1.5		Hydraulic Equipment to raise Mast with Denison TMG-3 Pump, Denison 4-Way Valve and Denison RV-20 Safety Valve Mounted on Drawworks; Hydraulic Cylinder with 12" O.D. Outer Cylinder, 9 1/2" O.D. and 5" O.D. Rams; 9 1/2" Two Stage Hydraulic Cylinder in Gooseneck of Trailer to level Rig on ramp; 2-Hydraulic Reservoir Hoses and Piping
1.6	1 each	Rotary Counter Shaft Assembly with 16" Fawick Air Clutch
1.7	2 each	Rig Steps with Hand Rails
1.8	1 each	6" Sheave Grooved for 11/8" Line for raising and lowering Upper Section of Mast
1.9	1 each	Line Spreader Plate for raising and lowering Upper Section of Mast
1.10	1 each	Hydraulic Lifting Bar and Bearing Block Mounted to Derrick
1.11		Hydraulic Oil, Drawworks Chain Oil
1.12	2 each	Engine Skids for D-334 Caterpillars
1.13		Part of Item #2 (Controls for Item #2)
1.14		N/A
1.15	2 each	Chain Guards (Oil Bath for Chain), (Drip Type for Rotary Chain)

1.16		N/A
1.17	4 each	8' x 16' Triple Thickness Malting Boards
1.18	1 each	Trailer Ramp - 34"H x 91"W x 31'6"L
1.19	1 each	Rotary Table Sub-Structure 8'W x 17'6"L x 7'8"H with Hand Rails
1.20	1 each	Pipe Racking Sub-Structure (250,000) 8'W x 17'86" x 8'10"H with Hand Rails
1.21	1 each	Spencer 400 HP-2-Engine Compound with 2-16" Fawick Air Clutches and Controls and Lubrication System
1.22	1 each	15" Parkersburg Double Hydromatic with Air Actuated Overriding Clutch, Control Valve and Oil Bath Chain Guard
1.23	1 set	Wire Rope Guy Lines
1.24	1 each	Lebus Steel Split Sleeve Grooving for 1 1/8" Line and 2 Sets Wear Plates for Drawworks Drum
1.25	1 each	IDECO 125 Ton Traveling Block and Hook with 4-30" Diameter Sheaves for 1 1/8" Line
1.26	1 each	Martin Decker FA-9 Rotary Torque Assembly
1.27	1 each	Geranimo Escape Slide
1.28	1 each	Calco Hydro-Clipper Weight Ind.
1.29	1 each	Martin Decker Tong Torque Pull Gauge
1.30	1 each	Hutchinson Hayes Vapor Proof Fluorescent and Mercury Lighting System for 97' Spencer Mast
1.31	1 each	Caterpillar D-334 TurboCharged Diesel Industrial Engine S/N 92B3835
1.32	1 each	Caterpillar D-334 TurboCharged Diesel Industrial Engine S/N 92B3841
1.33	1 each	Twin Disc. F-10017-TC-1 Torque Conv. P/N X-207266J; Spec. #60823; MS-390 Blading; with C-3 Output - S/N 256292
1.34	1 each	Twin Disc. F-10017-TC-1 Torque Conv. Same as Above except S/N 256293
1.35	1 each	Large (4 1/2" O.D. Frame) 7000 Monkey Board for 5" O.D. Drill Pipe with 5 1/2" F.H. Tool Joints
1.36	Cameron Mud Gauge Type D S/N 5222	
2.	1 each	Rotary Table - Emsco - 27 1/2", Type H, S/N 81

3.	1 each	Drilco Ezy Torque Type II Model D
4.	2 each	Steel Mud Pits - 40'L x 9'W x 6'H - Complete with Partitions; Pump Suction Manifold; Skimming Trough; and Fresh Water Lines and Valving
5.	1 each	Shale Shaker, Linkbelt 4' x 5' Vibrator Type C/W 3 HP Vapor Proof Electric Motor
6.	1 each	Mud Pump Unit Oilwell - 14 PHD - S/N 28217 with Steel Mud Ends complete with 7 1/4" Fluid End Parts, Section Hose, Discharge Vibrator Hose, Pressure Relief Valve, V-Belt Drive with Belt Guard, Engine House (Steel), powered with 1 Set GMC Series 671 Twin Engine Power Units Model 12103 with HD Gear Case. L.H. Engine S/N 6A0322554 R.H. Engine S/N 6A326199 HD Gear Case S/N HD 11588 with 1 Engine enclosed in Steel House
7.	1 each	Mump Pump Unit - Oilwell - 214P - S/N P-101-21 complete (Same as Above Unit) LH Engine S/N 6A0327296 RH Engine S/N 6A0327307 Gear Case S/N HD 11590 with 1 Engine enclosed in Steel House
8.	1 each	Mixing Pump Unit - 6" B.J. Centrifugal Pump S/N 236-6; Powered with 471 GMC Diesel Engine S/N 4A85725; Skid Mounted with Steel House
9.	1 each	Caterpillar Model D-334TA Generator Set - 205 KW - Gen. P/N - 5N21; Model Sr-4; Generator Frame #447 Engine Model D-334 DC Engine S/N 92B0411
10.	1 each	Caterpillar DIT packaged Generator Set, Model #3406, 200 KW S/N 90405530
11.	1 each	Steel Generator House - 9' x 28' x 9' - Skid Mounted
12.	1 each	Onan Generator Set - 6-KW Model #6-ODJB 3CE/2236AA S/N 1074897148
13.	1 each	Fuel Tank (Diesel) 4000 Gallon Cap. Skid Mounted with 200 ft. Steel Fuel Lines (Property of Union Oil Co.)
14.	1 each	Ramp, V-Door, 4' x 18' (4 1/2" O.D. Fabrication)
15.	2 each	Cat Walks - 4' x 24' Long (4 1/2" O.D. Fabrication)
16.	6 each	Pipe Racks - 5" O.D. Fabrication
17.	1 each	Parts House, Steel - 9' x 16', Skid Mounted
18.	1 each	Brewster Sand Line Unit - Type E-150 - S/N 7-15-47, powered with 671 GMC Diesel Engine S/N 671-R-55-6A31400, Skid Mounted
19.	1 each	HOWCO Wire Line Unit - Model B1-V-W8C2-X, P/N 805-0081
20.	1 each	Top Dog House - Steel 9' x 12', Skid Mounted

21.	1 each	Hydril Accumulator Closing Unit - S/N 11673 Type B-17-80 Accumulator Type D-20, S/N 11727, 1500 PSI WP complete with 3 Station Control Valves
22.	1 each	Shaffer Hydraulic Double Gate B.O.P. 12" - 3000 PSI - Type A, complete with Blind Rams and 5" O.D. Pipe Rams and 4" O.D. Pipe Rams
23.	1 each	Hydril Annular B.O.P Type G.K.-12-3000, S/N 31708-L
24.	1 each	Swivel - Brewster 4SX
25.	1 each	Kelly, 6" - Sq. - 34 ft. with 6 5/8" Reg. Conns.
26.	1 each	Kelly, 5 1/4 Hex - 40 ft. with 6 5/8" R-LH Box x 4 1/2" I.F. Pin
27.	1 each	Kelly, Cock Valve with 6 5/8" R-LH Conns.
28.	1 each	Kelly, Drive Bushing, Baash-Ross, Type 2RB56 with Roller Assemblies for 6" and 5 1/4 Hex Kellys
29.	1 each	Slush Pump - 4" Marlow with 3 HP Electric Motor, S/N H-1016433 - Frame #215-22
30.	1 each	Pony Sub-Structure consisting of the following items:
30.1		Rotary Table Pony Structure 8'W x 20'L x 6'H
30.2		Pipe Racking Pony Structure 8'W x 20'L x 6"H
30.3		Trailer Ramp Pony Structure 6'W x 12'L x 6'H (Housed in for Electrical Control Room)
30.4		Trailer Ramp Pony Structure 6'W x 12'L x 6'H (Housed in for Parts Room)
30.5		Trailer Ramp Extension
31.	1 each	Set, Rotary Tongs, Byron-Jackson, Type DD with Heads from 4" thru 15"
32.	1 each	Set, Rotary Tongs, Byron-Jackson, Type B with Heads
33.	1 each	Rotary Slips, Baash-Ross, Type DU Drill Pipe 5 9/16" Body with 5" Inserts
34.	1 each	Rotary Drill Collar Slips, Baash-Ross, 10 3/4" Body with 9 5/8" Inserts
35.	1 each	Rotary Drill Collar Slips, Baash-Ross, 8 5/8" Body with 7" Inserts
36.	1 each	Drill Collar Clamp, Baash-Ross
37.	1 each	Set, Elevator Links - 350 Ton - 8' Long

38.	1 each	Elevators, Drill Pipe - Web Wilson - Type T-150, 5 1/2" - 18° Taper
39.	1 each	Bit Breaker - 12 1/4"
40.	1 each	Bit Breaker - 9 7/8"
41.	1 each	Floor Block for Sand Line Operation
42.	1 each	Derrick Block for Sand Line Operation
43.	1 each	Bantam Crane, 18 ton, Mobile Unit
44.	1 each	Utility Pump - FXP Gardner-Denver (4 1/2" x 5")
45.	1 each	TOTCO Drilling Recorder - 4 Pen - Model 61A, S/N 4426
46.	1 each	Straight Hole TOTCO instrument - 8° Deviation only - C/W Barrel
47.	3 each	Crew Cars
48.	2 each	(Tool Pusher Cars) Cars with Radio Phone
49.		<u>Drill Collar Subs:</u>
49.1	1 each	2' Long Kelly Saver Sub - 8" O.D. x 2 13/16" I.D., 6 5/8" Reg. Pin Box
49.2	2 each	2' Long Kelly Saver Sub - 7" O.D. x 2 13/16" I.D., 5 1/2" F.H. Pin
49.3	2 each	3' Long Bit Subs - 8" O.D. x 2 13/16" I.D. 6 5/8" Reg. Double Box - Bored for 6R Float
49.4	2 each	2' Long X/O Sub - Bottleneck - 8" O.D. reducing to 7" O.D. x 2 13/16" I.D. with 5 1/2" F.H. Box x 6 5/8 Reg. Pin
49.5	1 each	18" Long X/O Sub - Bottleneck - 8" to 7" O.D. x 2 9/16" I.D. 6 5/8" Reg. Box x 4 1/2" F.H. Pin
49.6	2 each	3' Long X/O Sub - 7" O.D. x 2 13/16" I.D. - 5 1/2" F.H. Box x 5" H-90 Pin
49.7	2 each	3' Long X/O Sub - Bottleneck - 8" to 7" O.D. x 2 13/16" I.D. 6 5/8" Reg. Box x 5" H-90 Pin
49.8	2 each	3' Long Bit Subs - 7" O.D. x 2 5/16" I.D. - 5" H-90 Box x 4 1/2" Reg. Box - Bored for 4R Float (Type F-4R)
49.9	1 each	18" Long X/O Sub - 7" O.D. x 2 9/16" I.D. - 5" H-90 Box x 4 1/2" F.H. Pin
49.10	1 each	18" Long X/O Sub - 7" O.D. x 5 1/2" F.H. Box x 5" - H-90 Pin

49.11	1 each	28" Long X/O Sub - 8" O.D. x 2 13/16" I.D. - 5" H-90 Box x 6 5/8" Reg. Pin
49.12	1 each	18" Long X/O Sub - 8" O.D. x 2 9/16" I.D. - 6 5/8" Reg. Box x 5 1/2" F.H. Pin
49.13	2 each	4' Long X/O Sub - 11" O.D. x 3" I.D. - 6 5/8" Reg. Box x 7 5/8" Reg. Box
49.14	2 each	4' Long X/O Sub - 9 3/4" O.D. x 3" I.D. - 6 5/8" Reg. Box x 7 5/8" Reg. Pin
49.15	2 each	Kelly Saver Subs - 4 1/2" I.F. Box - 4" F.H. Pin
49.16	2 each	X/O Subs - 4" F.H. Box - 5" H-90 Pin
49.17	3 each	Pick Up Subs - 6 5/8" Reg. Pins with 5" Shanks
49.18	1 each	Bit Sub - 24" Long - 6 5/8" Reg. Pin x 7 5/8" Reg. Box
50.	1 each	6000 Gal. Steel Cylindrical Water Storage Tank 6' diameter x 20' long
51.	1 each	Ingersoll Rand, Model XHP-1150, Packaged Air Compressor S/N 112333U79643 - C/W G.M. Model DDAD 12V-71N Engine S/N 12VA66247 - Allisson Model HT-740-D Automatic Transmission Aftercoolers
52.	1 each	Storage Tank - 25,000 gallon capacity

EXHIBIT "F"

GENERAL PARTNERSHIP AGREEMENT

OF

_____

BETWEEN

MORGAN OIL, LTD.

AND

BARNWELL GEOTHERMAL CORPORATION

MGA
C2C.

_____ GENERAL PARTNERSHIP AGREEMENT

THIS GENERAL PARTNERSHIP AGREEMENT is entered into this _____ day of _____, 1991 by and between MORGAN OIL, LTD., a Kentucky corporation authorized to do business in Hawaii ("MOL"), and BARNWELL GEOTHERMAL CORPORATION, a Delaware corporation authorized to do business in Hawaii ("BGC"), each as a general partner.

W I T N E S S E T H:

WHEREAS, MOL and BGC desire to form a Hawaii general partnership for the purpose of designing, constructing and operating an electrical generation facility as contemplated by that certain Geothermal Development Agreement dated as of March 13, 1991 by and between MOL and BGC (the "Development Agreement");

NOW, THEREFORE, in consideration of the mutual covenants contained herein and other good and valuable consideration the receipt and sufficiency of which is hereby acknowledged, MOL and BGC agree as follows:

ARTICLE I

DEFINITIONS

In addition to terms defined elsewhere in this Agreement, the following terms have the following meanings for purposes of this Agreement:

"Adjusted Capital Account Deficit" means, with respect to any Partner, the deficit balance, if any, in such Partner's capital account as of the end of the relevant Fiscal Year, after giving effect to the following adjustments:

(a) Credit to such capital account an amount equal to the sum of (i) any amount such Partner is obligated to restore to any deficit balance in its capital account upon liquidation of the Partnership, as determined pursuant to Section 1.704-1(b)(2)(ii)(c) of the Treasury Regulations, (ii) such Partner's share of the Partnership's Minimum Gain, as determined pursuant to Section

1.704-1T(b)(4)(iv)(f) of the Treasury Regulations, and (iii) such Partner's share of the Minimum Gain attributable to Partner Nonrecourse Debt, as determined pursuant to Section 1.704-1T(b)(4)(iv)(h)(5) of the Treasury Regulations; and

(b) Debit to such capital account the items described in clauses (4), (5), and (6) of Section 1.704-1(b)(2)(ii)(d) of the Treasury Regulations.

The foregoing definition of Adjusted Capital Account Deficit is intended to comply with the provisions of Section 1.704-1(b)(2)(ii)(d) of the Treasury Regulations and shall be interpreted consistently therewith.

"Affiliate" means any Person related to another Person by any degree of common ownership, management or control and any officer, director, partner, agent or employee of such Person.

"Agreement" means this General Partnership Agreement, including all amendments hereto.

"Area of Mutual Interest" means (a) the area under which the mineral rights have been conveyed under the State Geothermal Lease, covering approximately 769 acres in the Puna District of the County of Hawaii as more particularly described in the State Geothermal Lease and upon which a geothermal well or wells will be drilled pursuant to the Development Agreement, (b) any area producing Geothermal Resources that are either (1) originally explored through wells drilled on the Leased Lands, or (2) produced through holes drilled on the Leased Lands, and (c) any area producing Geothermal Resources explored or produced through areas previously contained in the Area of Mutual Interest as defined in clauses (a) and (b) of this definition.

"Capital Contribution" means the money or property, if any, contributed to the capital of the Partnership by each Partner pursuant to Article VI of this Agreement. The Capital Contribution of each Partner shall be attributed to any subsequent owner of the Partnership Interest of such Partner.

"Capital Expenditures" means expenditures by the Partnership for capital improvements to the Generation Facility in accordance with the Operations Agreement or otherwise in accordance with this Agreement.

"Code" means the Internal Revenue Code of 1986, as amended, or corresponding provisions of subsequent superseding revenue laws.

"Construction Financing" means the nonrecourse indebtedness incurred by the Partnership in connection with the design and construction of the Generation Facility to be secured by all Partnership Properties and to cover all construction costs, fees and expenses incurred in the design and construction of the Generation Facility.

"Distribution" or "Distributions" means any Nonliquidating Distributions or Liquidating Distributions of cash or other property by the Partnership to the Partners arising from their interests in the Partnership, but does not include any payment or reimbursement made to either Partner pursuant to Article VIII of this Agreement.

"Drilling Partnership" means any of the partnerships, either general or limited, if any, formed by MOL or its Affiliate pursuant to the Development Agreement.

"Effective Date" has the meaning provided in Article V of this Agreement.

"Event of Default" has the meaning provided in Section 12.1 of this Agreement.

"Final Development Plan" means the final plan providing for the planning, design, construction and operation and management of the Generation Facility to be completed by the Operator pursuant to the Operations Agreement.

"Fiscal Year" means a period of twelve (12) consecutive months beginning on January 1st of each year and ending on December 31st of each year, except that the first Fiscal Year commences on the Effective Date and upon the termination of the Partnership the final Fiscal Year shall end on the date of such termination.

"Gain or Loss from a Capital Transaction" means gain or loss recognized by the Partnership, for federal and state income tax purposes, upon the occurrence of a capital transaction which gives rise to Net Extraordinary Cash Flow, including, without limitation, the sale of all or substantially all of the Partnership's assets in connection with a Liquidation.

"Generation Facility" means the electrical power generation facility contemplated by this Agreement and the Development Agreement to be designed, constructed and operated by the Operator on behalf of the Partnership pursuant to this Agreement and the Operations Agreement.

"Geothermal Resources" has the meaning given it by Section 182-1 of the Hawaii Revised Statutes, and includes, but is not limited to, hot water and steam.

"Gross Revenues" means all revenues of every kind received by the Partnership whether resulting from the operation of the Generation Facility or otherwise.

"Initial Development Plan" means the initial plan providing for the planning, design, construction and operation and management of the Generation Facility prepared by Geothermex, Inc. attached hereto as Exhibit "A" and incorporated herein by reference.

"Lani-Puna VI Assignment" means that certain Assignment in substantially the form attached hereto as Exhibit "B" and incorporated herein by reference, providing for the assignment from BGC to the Partnership of all of BGC's right, title and interest in and to the Lani-Puna VI Well and related fixtures and equipment but not the mineral interests lying beneath said well.

"Lani-Puna VI Well" means the well identified in that certain report prepared by Geothermex, Inc. ("Geothermex") entitled "Drilling History and Geology of the Lani-Puna VI Geothermal Test, Lani-Puna Prospect" and dated December 1984.

"Leased Lands" means the lands under which the mineral interests demised by the State Geothermal Lease are contained.

"Liquidating Distribution" means a distribution of Total Distributable Income, Net Extraordinary Cash Flow or other Partnership cash or property to the Partners made by reason of the Liquidation of the Partnership or the Liquidation of a Partner's Partnership Interest under Treasury Regulations Section 1.761-1(d).

"Liquidation" means, with respect to the Partnership, the termination of the Partnership under Section 708(b)(1)(A) of the Code and, with respect to a Partner when the Partnership is not in Liquidation, as defined above in this paragraph, the liquidation of a

Partner's Interest in the Partnership under Treasury Regulations Section 1.761-1(d).

"Loan to Defaulting Partner" or "Loans to Defaulting Partner" means a loan or loans made by a Partner or its Affiliate to the other Partner who fails to advance funds to the Partnership as required by Section 6.4 of this Agreement.

"Major Decision" has the meaning set forth in Section 7.3 of this Agreement.

"Management Committee" means the entity which shall make decisions for the Partnership not delegated to the Operator, including but not limited to, Major Decisions, as set forth more particularly in Article VII of this Agreement.

"Managing Partner" means MOL, or its successor.

"Minimum Gain" means an amount determined by (i) computing, with respect to each nonrecourse liability of the Partnership, the amount of gain (of whatever character), if any, that would be realized by the Partnership if it disposed of (in a taxable transaction) the assets of the Partnership subject to such liability in full satisfaction thereof (and for no other consideration), and (ii) then aggregating the amounts so computed. The amount of the Partnership's Minimum Gain shall be determined in accordance with the rules set forth in Section 1.704-1T(b)(4)(iv)(c) of the Treasury Regulations. A Partner's share of the Partnership's Minimum Gain at the end of any Fiscal Year of the Partnership shall equal the excess, if any, of (a) the sum of the aggregate "nonrecourse deductions" (as defined in Section 1.704-1T(b)(4)(iv)(b) of the Treasury Regulations) allocated to such Partner (and such Partner's predecessors in interest, if any) up to that time and the aggregate distributions to such Partner (and such Partner's predecessors in interest, if any) up to that time of proceeds of a nonrecourse liability that are allocable to an increase in the Partnership's Minimum Gain, over (b) the sum of such Partner's (and such predecessors') aggregate share of the net decreases in the Partnership's Minimum Gain up to that time and such Partner's (and such predecessors') aggregate share of the decreases up to that time in the Partnership Minimum Gain resulting from revaluation of Partnership property subject to one or more nonrecourse liabilities of the Partnership property subject to one or more nonrecourse liabilities of the Partnership, all determined in

accordance with the rules set forth in Section 1.704-1T(b)(4)(iv)(f) of the Treasury Regulations.

"Net Extraordinary Cash Flow" means, for any period with respect to which a Distribution is to be made, the net proceeds of a significant event of a capital nature, including sales of all or any substantial part of the Property, sales of any significant Partnership asset other than in the ordinary course of the Partnership's business, any refinancing, casualty or condemnation with respect to the Property, and any similar event determined by the Partners to be significant.

"Net Income" or "Net Loss" means the net income or net loss, respectively, of the Partnership as determined for financial reporting purposes on the accrual method or cash method of accounting, whichever is selected by the Partners.

"Net Taxable Income" or "Net Taxable Loss" means the net income or net loss, respectively, of the Partnership as determined for federal and state income tax purposes.

"Nonliquidating Distributions" means distributions of Total Distributable Income, Net Extraordinary Cash Flow or other Partnership cash or property to the Partners, other than in a Liquidating Distribution.

"Nonrecourse Deductions" means deductions of the amount and type described in Section 1.704-1(b)(4)(iv)(b) of the Treasury Regulations. The amount of Nonrecourse Deductions for a Fiscal Year of the Partnership equals the excess, if any, of the net increase in the amount of the Partnership's Minimum Gain during such Fiscal Year, over the aggregate amount of any distributions during such Fiscal Year of proceeds of a nonrecourse liability that are allocable to an increase in the Partnership's Minimum Gain, determined according to the provisions of Section 1.704-1(b)(4)(iv)(b) of the Treasury Regulations.

"Operating Account" means a separate account or accounts maintained by or on behalf of the Partnership with a financial institution in the State of Hawaii into which are deposited all monies received by or on behalf of the Partnership from its operations, including working capital in sufficient amounts to insure the timely payment of all expenses of operating the Generation Facility, including, without limitation, Total Fixed Charges and Total Operating Expenses.

"Operations Agreement" means that certain Operations Agreement in substantially the form attached hereto as Exhibit "C" and incorporated herein by reference, and to be entered into among the Operator and the Partnership providing for the Operator's planning, design, construction, operation and management of the Generation Facility on behalf of the Partnership.

"Operator" means the Person designated in accordance with Article VII of this Agreement to undertake the planning, design, construction and operations and management of the Generation Facility, on behalf of the Partnership pursuant to the Operations Agreement.

"Organizational Expenses" means the costs or expenses charged or billed to the Partnership, any Partner or any Partner's Affiliates in connection with the formation of the Partnership, including, but not limited to, reasonable accounting, legal and other professional fees, appraisal fees, printing costs, registration fees, filing fees and taxes, if any.

"Partner Loan" or "Partner Loans" means a loan or loans, respectively, made by a Partner or an Affiliate of a Partner to the Partnership pursuant to Article VI of this Agreement.

"Partner Nonrecourse Debt" means any nonrecourse debt (within the meaning of Section 1.704-1T(b)(4)(iv)(k)(2) of the Treasury Regulations) for which any Partner bears the economic risk of loss (as determined pursuant to Sections 1.704-1T(b)(4)(iv)(k)(1) and 1.752-1T(d)(3) of the Treasury Regulations).

"Partner" means either of the Partners.

"Partners" means, collectively, MOL and BGC.

"Partnership Business" means the business engaged in by the Partnership, which shall be the design, construction, ownership, management, and operation of the Generation Facility, and in certain instances, the drilling of geothermal wells for Geothermal Resources, in such manner and upon such terms and conditions as set forth in this Agreement or as the Partnership shall otherwise determine to be in its best interests.

"Partnership Expenses" means all expenses of the Partnership of any kind incurred in connection with the

management, administration or conduct of the Partnership, Partnership Property or Partnership Business, including, without limitation, Capital Expenditures, Total Fixed Expenses, Total Operating Expenses, Organizational Expenses, any compensation paid to Managing Partner, including, without limitation, the Management Fee pursuant to Section 8.4, and reimbursements to the Partners pursuant to Article VIII hereof.

"Partnership Interest" means the beneficial ownership interest of a Partner in the Partnership, which interest shall include the right of such Partner to the assets of the Partnership, such Partner's distributive share of income, gains, profits, losses, expenses, credits, obligations, and liabilities of the Partnership, and any and all other benefits to which such Partner may be entitled as provided in this Agreement and the UPA. The Partnership Interest of each Partner is set forth in Exhibit "D" attached to and made a part of this Agreement, as the same may be amended from time to time to reflect any changes. The initial Partnership Interest of each Partner is as follows:

Name of Partner	Partnership Interest
MOL	50%
BGC	50%
Total	100%

The Partnership Interest of each Partner is subject to adjustment as provided in Section 6.5 of this Agreement.

"Partnership Property" means the Generation Facility and all cash, real property, personal property, tangible property, intangible property, including, without limitation, all contractual rights and other assets of the Partnership.

"Permanent Financing" means the permanent non-recourse financing to be obtained by the Partnership and to be secured by the Generation Facility and all related fixtures and equipment and incurred to take out the Construction Financing.

"Person" means and includes an individual, corporation, firm, partnership, trust or other entity or form of association.

"Regulatory Allocations" means those allocations made pursuant to Section 9.2 of this Agreement.

"Reserve Fund" means the reserves determined and set aside pursuant to Section 9.5 of this Agreement.

"State Geothermal Lease" means that certain State of Hawaii Department of Land and Natural Resources Mining Lease No. R-3, dated August 10, 1981, by and between the State of Hawaii and BGC, which lease conveys to BGC certain mineral rights in the Leased Lands.

"Total Distributable Income" means, with respect to any period, Gross Revenues minus the following:

(a) Organizational Expenses reimbursed pursuant to Section 8.2 of this Agreement.

(b) Additions to the Reserve Fund pursuant to Section 9.5 of this Agreement;

(c) Total Fixed Charges; and

(d) Total Operating Expenses.

"Total Fixed Charges" means the sum of the following:

(a) The actual debt service payments made in connection with indebtedness of the Partnership with respect to the financing of the Generation Facility, including, but not limited to, debt service on the Construction Financing or the Permanent Financing;

(b) Real Property taxes;

(c) Property insurance costs;

(d) Ground rents;

(e) Equipment lease rents;

(f) Expenses for repair and maintenance of the Generation Facility of an extraordinary nature; and

(g) Compensation paid to the Managing Partner pursuant to Section 8.4 of this Agreement.

"Total Operating Expenses" means all expenses incurred in connection with the operation and management of the Generation Facility, including, but not limited to:

(a) The consideration payable to the Operator under the Operations Agreement;.

(b) The cost of sales; salaries and wages; departmental expenses; administrative and general expenses; fringe benefits, payroll tax and employee-related expenses; and charges for heat, water, light, power and other utilities to the extent not paid by the Operator;

(c) Expenditures for repairs and maintenance of the Generation Facility in the ordinary course;

(d) Expenditures for replacements not charged to the Reserve Fund;

(e) Insurance premiums for operations;

(f) All taxes, assessments and charges relating to the operation of the Generation Facility and related facilities, including, without limitation, general excise and similar taxes, which may be levied or imposed upon the Partnership or the Partners, but not including real property taxes or corporate franchise or income taxes of the Partnership or the Partners;

(g) Legal fees and fees of accountants and other consultants, to the extent not paid by the Operator, for consulting and advisory services directly relating to the operation of the Generation Facility, its facilities and the Partnership;

(h) Expenditures for marketing, advertising, and public relations; and

(i) The cost of inventories and supplies used in the operation of the Generation Facility.

"Treasury Regulations" means final, temporary and proposed U.S. Treasury Department income tax regulations, as amended.

"UPA" means, collectively, the Uniform Partnership Act, Chapter 425, Part IV, of the Hawaii Revised Statutes, together with Chapter 425, Part I, of the Hawaii Revised Statutes.

ARTICLE II

FORMATION

Section 2.1. Formation. The Partners hereby from the Partnership pursuant to the provisions of the UPA.

Section 2.2. Name. The name of the Partnership shall be "_____."

Section 2.3. Principal Office. The principal office of the Partnership shall be located at _____, Honolulu, Hawaii. Subject to the obtaining the other Partner's prior written consent, the Managing Partner may relocate the principal office of the Partnership from time to time so long as it remains in the State of Hawaii. The Partnership also may have such additional offices as the Partners may agree.

Section 2.4. Title to Assets. Except as the Partners may otherwise agree in writing in their sole discretion, title to all assets and properties of the Partnership, including but not limited to Partnership Property, owned or acquired by the Partnership shall be held in the name of the Partnership.

ARTICLE III

PURPOSE AND SCOPE OF THE PARTNERSHIP

The purpose of the Partnership is to generate and market electricity produced from Geothermal Resources purchased from either independent or related producers of such resources, including but not limited to, the Drilling Partnership(s), or MOL or its Affiliates. In furtherance of such purpose, the Partnership shall appoint an Operator, initially Geothermex, Inc., which, pursuant to the Operations Agreement, shall (1) design the Generation Facility with a capacity consistent with commercially available Geothermal Resources and prudent engineering practices and obtain all necessary governmental approvals

and consents, (2) be responsible for the construction of and day-to-day operation and management of such facility and (3) market the electricity and by-products produced by the Generation Facility to Hawaii Electric Light Company, Inc. or other utilities or consumers, all on behalf of the Partnership. Financing for such construction and operation, the Construction Financing and ultimately the Permanent Financing, shall be negotiated by the Operator on behalf of the Partnership, provided, however, the terms thereof shall be reasonably satisfactory to both Partners. Notwithstanding the foregoing, the Partnership shall also engage in any other business necessary to the accomplishment of the above-described purpose, or otherwise related to such purpose, including but not limited to, the drilling of additional geothermal wells for Geothermal Resources for its own account, whether itself or by delegation to the Operator, if nonrecourse financing on terms and conditions reasonably satisfactory to both the Partners, in addition to the Permanent Financing, is available.

ARTICLE IV

PARTNERSHIP REGISTRATION STATEMENT

Concurrently with the execution of this Agreement, the Partners shall execute, and the Managing Partner shall cause to be filed with the Department of Commerce and Consumer Affairs (the "DCCA"), a Partnership Registration Statement pursuant to Section 425-1 of the UPA. Thereafter the Partners shall execute and the Managing Partner shall cause to be filed with the DCCA, such amendments to said Partnership Registration Statement as may be required under the UPA.

ARTICLE V

TERM

The term of the Partnership shall commence as of the date of this Agreement as first set forth above (the "Effective Date") and shall continue until terminated in accordance with the provisions of this Agreement or by operation of law.

ARTICLE VI

CAPITAL CONTRIBUTIONS AND LOANS

Section 6.1. Initial Capital Contribution of BGC. On or about the Effective Date, BGC, as its initial Capital Contribution, shall convey to the Partnership the Lani-Puna VI Well and related fixtures and equipment by executing and delivering to the Partnership the Lani-Puna VI Assignment. The Partners agree that as of the Effective Date the Lani-Puna VI Well has a fair market value of Six Hundred Thousand Dollars ($600,000.00). Notwithstanding the foregoing, however, if a pipeline easement (the "Pipeline Easement") which would allow the Partnership to construct and utilize a pipeline from the Generation Facility to the Lani-Puna VI Well cannot be obtained by the Effective Date, in lieu of the foregoing BGC shall contribute to the Partnership as its Initial Capital Contribution, the sum of Six Hundred Thousand Dollars ($600,000.00) in cash, by deposit to a Partnership bank account in Honolulu, Hawaii by wire transfer or in otherwise immediately available funds.

Section 6.2. Initial Capital Contribution of MOL. On the Effective Date, MOL, as its initial Capital Contribution, shall contribute to the Partnership, (i) by deposit to a Partnership bank account in Honolulu, Hawaii, Six Hundred Thousand Dollars ($600,000.00) in cash, by wire transfer or in otherwise immediately available funds, and (ii) valid and unencumbered title to the Pipeline Easement, if the Pipeline Easement has been obtained pursuant to MOL's obligations under the Development Agreement.

Section 6.3. Additional Capital Contributions. Each Partner shall make additional Capital Contributions ("Agreed Additional Contributions") only in such respective amounts and at such times as may be agreed to in writing by both Partners, or by the unanimous vote of the Management Committee. Neither Partner shall be obligated to agree to make any such additional capital contributions to the Partnership. Except as provided in this Agreement, neither Partner shall be obligated or entitled to make any additional capital contributions to the Partnership.

Section 6.4. Failure to Make Agreed Additional Contributions.

(a) Rights of Nondefaulting Partner. If either Partner (a "Defaulting Partner") fails to make its

Agreed Additional Contribution as determined pursuant to Section 6.3 of this Agreement, the other Partner not failing to do so (the "Nondefaulting Partner"), in addition to any remedies it may have hereunder or at law, shall have the right to do any of the following, provided it does so not later than thirty (30) days after the date (the "Cash Need Date") established by the Partners pursuant to Section 6.3 of this Agreement as the date by which the Agreed Additional Contributions were to have been made to the Partnership:

(i) To withdraw its respective Agreed Additional Contribution made to the Partnership, together with interest thereon at the rate of 12% per annum from the date such Agreed Additional Contribution was made;

(ii) To advance any portion of the Agreed Additional Contribution due from the Defaulting Partner (the "Deficiency") to the Partnership as an additional Capital Contribution or as a Partner Loan, as may be determined by the Nondefaulting Partner, in its sole discretion, on behalf of and for the account of the Nondefaulting Partner; or

(iii) To make (or cause its Affiliate(s) to make) a loan to the Defaulting Partner (a "Loan to Defaulting Partner") by advancing to the Partnership any portion of the Defaulting Partner's Agreed Additional Contribution on behalf of and for the account of the Defaulting Partner. Such advance shall be characterized as either a Capital Contribution or as a Partner Loan, as determined by the Nondefaulting Partner in its sole discretion.

(b) Limits on Advances by Nondefaulting Partner. Notwithstanding anything contained in Subsection 6.4(a), the total additional advances which may be made by the Nondefaulting Partner pursuant to Subsections 6.4(a)(ii) and (iii) of this Agreement shall not exceed the amount of the Deficiency. If, within thirty (30) days after the Cash Need Date, the Nondefaulting Partner has made additional advances in excess of the Deficiency, such excess shall be refunded to the Nondefaulting Partner.

Section 6.5. Adjustment of Partnership Interests. If the Nondefaulting Partner makes an additional Capital Contribution for its own account pursuant to Subsection 6.4(a)(ii) of this Agreement, the respective Partnership Interests of the Nondefaulting Partner and Defaulting Partner shall thereupon be recalculated so that:

(a) The Partnership Interest of the Defaulting Partner immediately prior to the making of such additional Capital Contribution by the Nondefaulting Partner shall be reduced (but not below 1%) by subtracting therefrom the product (rounded to six decimal places) obtained by multiplying such Partnership Interest by a fraction, the numerator of which is three (3) times the aggregate amount of such additional Capital Contributions made by the Nondefaulting Partner pursuant to Subsection 6.4(a)(ii) (said aggregate being hereinafter referred to as the "Aggregate Additional Capital Contributions") and the denominator of which is the total amount of all Capital Contributions to the Partnership theretofore made by the Partners, including, without limitation, the Aggregate Additional Capital Contributions; and

(b) The Partnership Interest of the Nondefaulting Partner making such additional Capital Contribution pursuant to Subsection 6.4(a)(ii) shall be increased by adding thereto the product determined pursuant to Subsection 6.5(a) of this Agreement.

Section 6.6. Partner Loans. All Partner Loans made pursuant to the provisions of this Article VI shall be made in compliance with the following provisions:

6.6.1 Partner Loans Not Treated as Capital Contributions. Partner Loans shall not be considered or treated as Capital Contributions.

6.6.2 Loan Documentation. Each Partner Loan shall be evidenced by a promissory note made by the Partnership to the lending Partner or Affiliate (a "Partnership Note") and secured by a mortgage made by the Partnership to the lending Partner or Affiliate (a "Partnership Mortgage"), as follows:

(a) Partnership Notes. Each Partnership Note shall be in such form and substance as required to cause such Partnership Note to represent the effective, enforceable and non-recourse (except to the extent of the Partnership's interest in the Partnership Property) obligation of the Partnership to the lending Partner or Affiliate, as the case may be. The principal of each Partnership Note shall be in the amount of the Partner Loan evidenced by such Partnership Note. All other terms and conditions of each Partnership Note, including, without limiting the generality of the foregoing, interest on the principal of such Partnership Note, shall be

commercially reasonable in light of conditions existing at the time such Partnership Note is made, with due consideration given to anticipated Partnership Expenses, necessary reserves, and other factors affecting the Partnership's ability to repay the sums represented by the Partnership Note. The rate of interest of the principal of the Partnership Note shall not exceed the maximum permitted by law. The outstanding principal balance and accrued but unpaid interest of Partnership Notes shall be paid to the lending Partner or Affiliate, as the case may be, from time to time from any funds available to the Partnership. All amounts owed with respect to Partner Loans shall be repaid before any Distributions are made to Partners under Sections 9.3 or 9.4 of this Agreement. In any event, all amounts owed with respect to Partner Loans shall be repaid prior to the dissolution of the Partnership pursuant to Article XV of this Agreement.

(b) Partnership Mortgages. Partnership Mortgages shall be in such form and substance required to cause each to effectively create a valid mortgage lien on and security interest in the Partnership Property in favor of the lending Partner or its Affiliate(s). A single Partnership Mortgage may secure the repayment of all Partner Loans made by each Partner or its Affiliate(s). The lien and security interest created by a Partnership Mortgage shall permit the lending Partner or its Affiliate(s), as the case may be, to foreclose upon and obtain ownership of all right, title and interest of the Partnership in the Partnership Property in the event that any Partnership Note is not paid when due, but shall otherwise be without recourse against the Partnership. The Partnership Mortgages shall provide that the Partnership has the right to redeem such right, title and interest prior to foreclosure thereof by paying to the lending Partner or its Affiliate(s), as the case may be, the outstanding principal balance of the Partnership Notes secured thereby and interest thereon, together with any costs (including attorneys' fees) incurred by the lending Partner or its Affiliate(s) in connection with such foreclosure proceedings. The Partners agree that such foreclosure would be for value received and shall not be, or be construed as, a forfeiture of the right, title and interest of the Partnership in the Partnership Property. The Partners waive and renounce any right to any appraisement, valuation, stay, extension or redemption concerning such right, title or interest so subject to foreclosure, and all rights concerning the marshalling of assets which may otherwise be provided by the Constitution or laws of the United States, the State of Hawaii or any

other governmental entity having jurisdiction. Upon the request of any of the Partnership's other mortgage lenders, including but not limited to the lenders of the Construction Financing or the Permanent Financing, the lending Partners and/or their Affiliates shall each cause their respective Partnership Mortgages to be subordinated to the lien of such lender's mortgage.

6.6.3 Execution of Loan Documents. Both Partners shall execute the Partnership Notes and Partnership Mortgages on behalf of the Partnership; provided, however, that the Defaulting Partner's consent or signature shall not be required in connection with any Partner Loans made by the Non-Defaulting Partner.

Section 6.7. Loans to Defaulting Partner. All Loans to the Defaulting Partner made pursuant to the provisions of this Article VI shall be made in compliance with the following provisions:

6.7.1 Terms and Conditions of Loans to Defaulting Partner. Each Loan to the Defaulting Partner shall bear interest at the rate of twelve percent (12%) per annum and shall be repaid by the Defaulting Partner within ten (10) days after demand of the Nondefaulting Partner or its Affiliate(s) making the same. Whether or not repayment has been demanded, all Distributions to which the Defaulting Partner is entitled shall be paid directly to the Nondefaulting Partner making such Loan to the Defaulting Partner to be applied in repayment thereof. All payments with respect to any Loan to the Defaulting Partner shall be credited first to any interest then due on such Loan to the Defaulting Partner and any interest which is not paid shall, to the extent not prohibited by law, be added to the principal amount of said Loan to the Defaulting Partner at the end of such calendar year. Upon transfer of all or any portion of a Partner's Partnership Interest, all Loans to the Defaulting Partner made to such Partner shall automatically become due and payable.

6.7.2 Prepayment. Notwithstanding anything to the contrary contained in this Section 6.7, the Defaulting Partner shall have the right to repay without penalty, at any time, in full or in part any Loan to the Defaulting Partner made to it. Any such payment shall be applied first to any interest accrued on such Loan to the Defaulting Partner and then to the outstanding principal balance thereof.

6.7.3 Grant of Security Interest. Each of the Partners hereby pledges, transfers, assigns and hypothecates its entire Partnership Interest to the other Partner as security for the repayment of the aggregate amount of any and all Loans to the Defaulting Partner made to it by the other Partner or its Affiliates. Notwithstanding the foregoing, this Subsection 6.7.3 shall not be construed as anything other than an assignment of a security interest in the Partnership Interests, and, until such time as it becomes a Defaulting Partner, each Partner shall be entitled to exercise all rights of an owner with respect to its Partnership Interest including, without limitation, rights to receive Distributions. To the extent permitted under applicable law, this Agreement is deemed to be a "security agreement", as defined in Chapter 490, Hawaii Revised Statutes, as amended from time to time, and the Nondefaulting Partner shall have all of the rights and remedies of secured parties under said Chapter 490. Concurrently with the execution of this Agreement, each Partner shall execute and deliver to the other Partners UCC-1 Financing Statements and such further assurances for such purposes as may be necessary. Each Partner hereby authorizes the other Partner to file continuation statements with respect to said UCC-1 Financing Statements in form satisfactory to the secured party Partner without the signature of the debtor Partner whenever lawful, and upon request the debtor Partner will execute such continuation statements. Subject to the provisions of Article XII of this Agreement, the Nondefaulting Partner shall have the right to realize upon its security interest by selling, assigning, transferring, endorsing, and delivering all or any part of the Defaulting Partner's Partnership Interest at public or private sale, in accordance with the following provisions, for such price and on such terms as the Nondefaulting Partner in its discretion shall deem appropriate, provided that every aspect of the sale, including the method, manner, time, place and terms, shall be commercially reasonable and shall include, but not be limited to, a provision for the sale, if commercially feasible, of any contractual rights of the Partnership:

(a) Each purchaser at any such sale holds such Partnership Interest, or any part thereof, absolutely free from any claim or right on the part of the Defaulting Partner and the Defaulting Partner waives (to the extent permitted by law) all rights of redemption, stay and/or appraisal which it now has or at any time in the future may have under any rule or law or statute now existing or hereafter enacted.

(b) The Nondefaulting Partner shall give the Defaulting Partner thirty (30) days' written notice by certified mail (which the Partners agree is reasonable notification within the meaning of Section 9-504(3), Hawaii Revised Statutes) of the Nondefaulting Partner's intention to make any such public or private sale, which notice shall state the time and place of any public sale or the time after which any private sale or other intended disposition is to be made and the terms of any private sale or other intended disposition.

(c) Notwithstanding paragraph (b) of this Subsection 6.7.3, the Defaulting Partner shall have fifteen (15) days after it receives such notice (but in no event more than thirty (30) days after such notice is given) in which to pay to the Nondefaulting Partner (or its Affiliate) the Loan to the Defaulting Partner together with interest thereon and all costs and expenses, (including, without limitation, reasonable attorneys' fees) incurred by the Nondefaulting Partner (or its Affiliate) in pursuing its remedies hereunder, in which event the Defaulting Partner is deemed to have cured its default under this Agreement and shall retain its Partnership Interest.

(d) Any such public sale shall be held at such time within ordinary business hours and at such place as the Nondefaulting Partner may fix and state in the notice of publication (if any) of such sale. At any such sale, the Defaulting Partner's Partnership Interest may be sold as an entirety or separately and for such consideration, and upon such other terms and conditions, as the Nondefaulting Partner may (in its sole and absolute discretion) determine which shall include, but not be limited to, a provision for the sale, if commercially feasible, of any contractual rights of the Partnership. The Nondefaulting Partner shall not be obligated to make any sale of the Defaulting Partner's Partnership Interest if it shall determine not to do so, regardless of the fact that notice of sale of such Partnership Interest may have been given. The Nondefaulting Partner may, without notice or publication, adjourn any public or private sale or cause the same to be adjourned from time to time by announcement at the time and place fixed for sale, and such sale may, without further notice, be made at the time and place to which the same was so adjourned.

(e) If a sale of all or any part of the Defaulting Partner's Partnership Interest is made on credit, the Nondefaulting Partner may retain such Partnership Interest, or part thereof, so sold until the purchase

price is paid by the purchaser or purchasers thereof, but the Nondefaulting Partner shall not incur any liability in case any such purchaser or purchasers shall fail to pay such purchase price and, in case of any such failure, such Partnership Interest may be sold again upon like notice.

(f) At any sale made in accordance with this Subsection 6.7.3, the Nondefaulting Partner may bid for or purchase all or any part of the Partnership Interest offered for sale, free from any right of redemption, stay or appraisal on the part of the Defaulting Partner (all such rights being also hereby waived and released to the extent permitted by law), and may make payment on account thereof by using any claim then due and payable to the Nondefaulting Partner from the Defaulting Partner, pursuant to this Agreement, as a credit against the purchase price, and the Nondefaulting Partner may, upon compliance with the terms of sale, hold, retain and dispose of such property without further accountability to the Defaulting Partner therefor.

(g) A written agreement to purchase all or any part of such Partnership Interest shall be treated as a sale thereof and the Nondefaulting Partner may carry out such sale pursuant to such agreement unless the Defaulting Partner is subsequently deemed to have cured its default under a Loan to the Defaulting Partner pursuant to paragraph (c) of this Subsection 6.7.3.

(h) If a sale is made in accordance with this Subsection 6.7.3, the proceeds thereof shall be distributed as follows: (i) first, to the Nondefaulting Partner in an amount equal to the sum of (x) all costs and expenses, (including, without limitation, reasonable attorneys' fees) incurred by the Nondefaulting Partner in connection with such sale and in pursuing any of its remedies pursuant to this Subsection 6.7.3, and (y) the principal balance of the Loan to the Defaulting Partner made to the Defaulting Partner, together with interest thereon from the date of default until the receipt of sale proceeds by the Nondefaulting Partner; and (ii) last, to the Defaulting Partner, the balance of such sale proceeds.

(i) As an alternative to exercising the power of sale herein conferred upon it, the Nondefaulting Partner may proceed by suit or suits at law or in equity to foreclose its security interest, under this Agreement and sell the Defaulting Partner's Partnership Interest or any part thereof pursuant to judgment or decree of a court or courts having competent jurisdiction.

6.7.4 Assignment of Security Interest. If a Partner becomes a Defaulting Partner, the Nondefaulting Partner may assign the security interest granted by the Defaulting Partner pursuant to Subsection 6.7.3 of this Agreement (and all rights thereunder) and, in the event of such an assignment, the assignee(s) shall have all of the rights and remedies of the assigning Nondefaulting Partner.

Section 6.8. No Interest on Capital Contributions. Unless specifically provided for in this Agreement, no Partner shall receive interest on any Capital Contribution.

Section 6.9. No Withdrawal or Additional Capital Contributions. Except as specifically provided in this Agreement or by law, no Partner shall be entitled to withdraw any part of its Capital Contribution except that each Partner shall be entitled to withdraw Six Hundred Thousand Dollars ($600,000) in cash upon the funding of the Permanent Financing and the receipt of such funds by the Partnership. No Partner shall be required or entitled to make any additional Capital Contribution to the Partner other than as provided in this Agreement.

Section 6.10. Capital Accounts. A capital account shall be determined and maintained for each Partner throughout the full term of the Partnership in accordance with the capital accounting rules set forth in Section 1.704-1(b)(2)(iv) of the Treasury Regulations. The capital account of each Partner shall be increased and decreased in accordance with the rules set forth in said Section 1.704-1(b)(2)(iv).

ARTICLE VII

OPERATOR AND MANAGEMENT COMMITTEE

Section 7.1. Appointment of Operator and Management of the Generation Facility. The Partnership shall enter into the Operations Agreement with the Operator and delegate to the Operator the planning, negotiation of financing, supervision of construction, operations, day-to-day management of and marketing of electrical power and by-products produced by the Generation Facility as specified in Section 7.4 hereof and the Operators Agreement. The Partners agree that the initial Operator shall be Geothermex, Inc. The Managing Partner

shall oversee the Operator in the performance of its duties and shall act as a liason between the Operator, the Partnership and the Partners. The Operator shall act only in accordance with the Operations Agreement, the Initial Development Plan and the Final Development Plan. All Major Decisions shall be made in accordance with Section 7.3 of this Agreement and all matters described in Section 7.2.4(a - h) shall be decided as set forth in Section 7.2.4. All other duties not delegated to the Operator or to be undertaken by the Management Committee, shall be delegated to the Managing Partner.

Section 7.2. Management Committee.

7.2.1. Formation, Representation. Each Partner shall appoint one (1) principal member and one (1) alternate member to represent such Partner on a committee to be formed and governed under this Section 7.2 and this Agreement (the "Management Committee").

7.2.2. Meetings. The Management Committee shall hold regularly scheduled meetings to make Major Decisions, supervise and review the Operator's performance and the progress of the Generation Facility, and all other matters not delegated to the Operator. Such regularly scheduled meetings shall be held at least [insert interval] while the Generation Facility is being designed and constructed and at least [insert interval] while the Generation Facility is in operation. All such meetings shall be scheduled by the Managing Partner who shall use every effort to pre-schedule such meetings at regular intervals so that all principal members may attend such meetings. The Management Committee may also at any time with at least three (3) days notice meet upon the request of any Partner.

7.2.3. Attendance by Operator. The Operator, or its representative shall be invited to be present at all Management Committee Meetings and all such meetings shall be pre-scheduled by the Managing Partner so as to make all reasonable efforts to insure the Operator's attendance. Notwithstanding the above, the Operator shall not have a vote at such meetings and the failure of the Operator to appear at such a meeting shall not affect the validity of the actions taken thereof.

7.2.4. Voting. Each principal member of the Management Committee and in the absence of a principal member, each respective alternate member, shall have one vote for each one percent (1%) of Partnership Interest

held by the Partner such member represents. All matters presented to the Management Committee, including but not limited to, Major Decisions as set forth in Section 7.3 of this Agreement shall require a seventy five percent (75%) vote, except for decisions regarding the following:

(a) the terms, conditions and amounts of the Construction Financing and the Permanent Financing;

(b) the termination of the Operator or the appointment of a new Operator;

(c) amendment of the Operations Agreement or this Agreement;

(d) Agreed Additional Capital Contributions;

(e) transfer of Partnership Interest(s) or withdrawal from the Partnership;

(f) the limitation of the distribution of the Total Distributable Income pursuant to Section 9.3 of this Agreement;

(g) to approve the sale, lease, transfer, mortgage, assignment of any interest in, or other disposition of the Generation Facility or any portion thereof; and

(h) to approve any action which would make it impossible to carry on the Partnership Business;

which shall each require a unanimous vote of the members of the Management Committee. In the event a required vote for any particular matter cannot be obtained, whether by deadlock or otherwise, such matter shall be presented to the Management Committee again, at a meeting to be called no later than one (1) week after the meeting at which such vote could not be obtained to vote on such matter again. If after the second vote the matter other than those set forth in subparagraphs (a - h) above, cannot be decided, the matter shall be submitted to arbitration to pursuant to Article XIII of this Agreement.

Section 7.3. Major Decisions. The Management Committee and not the Managing Partner or the Operator shall make all Major Decisions defined as the following general matters:

(a) To approve any particular action to be taken by the Operator which substantially deviates from the actions to be taken pursuant to either the Initial Development Plan or the Final Development Plan (but not the amendment of the Operations Agreement), as the case may be, including but not limited to (i) any proposed act, decision or expenditure by the Operator which would result in a change in any of the Project Budgets or Project Costs set forth in the Initial Development Plan or the Final Development Plan in the aggregate in excess of ten percent (10%) of the amount for any single line item contained therein for the applicable budget period;

(b) To approve any sale, lease, transfer or disposition of Partnership Assets or Partnership Property other than as set forth in the Final Development Plan;

(c) The establishment and amount of reserves to be set aside as a Reserve Fund pursuant to Section 9.5 of this Agreement other than Net Extraordinary Cash Flow;

(d) To approve of the acquisition of real property, fixtures or equipment other than as set forth in the Final Development Plan, provided however, that no approval is needed for acquisitions by the Operator of property, fixtures or equipment described in the Initial or Final Development Plan if the cost of such items, in the aggregate, does not exceed one hundred ten percent (110%) of such amount budgeted for such item(s) under the Final Development Plan;

(e) The final terms and conditions of any Power Supply Agreements (as defined in the Operations Agreement) negotiated by the Operator on behalf of the Partnership;

(f) To approve any change from accounting methods provided in this Agreement and any decision or election for the Partnership with respect to treatment of various transactions for federal income or state tax purposes;

(g) To approve the attorneys, independent certified public accountants (including the Auditor), insurance brokers and insurance consultant, and all banks for the Partnership;

(h) To approve the amount and timing of any distributions to the Partners;

(i) To review any management agreement entered into by the Operator and any third party for the planning, development or operation of the Generation Facility or any portion thereof to the extent such agreement and the terms thereof are not contemplated by the Final Development Plan.

(j) To approve the filing of lawsuits and the disposition of all claims and litigation which claims and lawsuits exceed $10,000 in value or involve declaratory or injunctive relief, and arise out of or relate to the Generation Facility or involving the Partnership or its assets, including without limitation, approval of all settlements of such claims or litigation;

(k) To approve confession of any judgment against the Partnership or the filing of any petition to place the Partnership in bankruptcy or under the protection of any bankruptcy law.;

(l) To approve organization or acquisition in whole or in part, by the Partnership of any other entity to carry out any activities of the Partnership;

(m) To approve all insurance acquired for the Partnership or for the Generation Facility provided, however only to the extent such insurance is not contemplated by the Final Development Plan;

(n) To replace the Arbitrators described in Article XIII of this Agreement;

(o) To approve any conditions imposed by any Governmental Authority in the issuance of any permit or approval for the development of the Generation Facility, which conditions are not anticipated in the Final Development Plan;

(p) To approve all change orders to construction contracts entered into by the Operator on behalf of the Partnership as contemplated by the Final Development Plan which, in the aggregate, would result in a change in any of the Project Budgets or Project Costs set forth in the Final Development Plan by ten percent (10%) of the amount for any single line item contained therein for the applicable budget period; and

(q) To remove the Managing Partner and designate a new Managing Partner.

(r) To change or modify the Management Fee set forth in Section 8.4 of this Agreement.

Section 7.4. Operator's Duties. The duties of the Operator, which shall be set forth more specifically in the Operations Agreement, shall include the following:

(a) The strategic planning of the Partnership Business including but not limited to:

(i) the obtaining of all permits, consents, licenses and approvals for the design, construction and operation of the Generation Facility from any and all governmental agencies or authorities;

(ii) all work necessary for the final planning and design of the Generation Facility;

(iii) all work necessary for locating the Generation Facility;

(iv) the negotiation of, subject to the approval of the Partners, the terms of the Construction Financing and the Permanent Financing, and the obtaining of the same or other financing necessary for the conduct of the Partnership Business;

(v) supervising the construction of the Generation Facility, including the hiring and supervision of all necessary construction contractors and crews and all materials;

(vi) negotiating the sale of all electricity and other products produced by the Generation Facility to utilities and consumers (i.e. the Power Supply Contracts);

(vii) the planning of, obtaining all necessary permits, approvals, consents and licenses for and conducting any and all additional geothermal drilling undertaken by the Partnership for its own account;

(b) the management of the day-to-day operation of the Generation Facility.

The Operator shall act only in accordance with the Operations Agreement and the Final Development Plan and Operating Plan attached thereto, subject to permitted variations in performance which are either (a) within the range of permitted variance under the Operations Agreement or (b) are agreed to by the unanimous vote of the Management Committee, subject to such variances which are described in Section 7.3 of this Agreement or amendment of the Operations Agreement pursuant to Section 7.2.4(c) of this Agreement.

Section 7.5. Termination of Operator. If the Operator is terminated pursuant to a breach of the Operations Agreement or by the unanimous vote of the Management Committee, the Managing Partner shall use all reasonable efforts to locate a new Operator, to perform the duties of the Operator set forth herein and in the Operations Agreement. If such Operator cannot be located within six (6) months of the termination of the Operator or such additional period as may be agreed to by the unanimous vote of the Management Committee, then the Partners shall have the right to terminate this Agreement and dissolve the Partnership by written consent of all Partners.

Section 7.6. Operations Without Operator. In the event the Partnership shall not have an Operator, including during any periods in which the Partnership shall be seeking to employ an Operator, the Managing Partner shall assume the duties of the Operator and shall perform all such duties in accordance with the previous Operations Agreement and in connection therewith be granted the powers and rights set forth in Section 11.2 of this Agreement as if such Managing Partner were the Operator thereunder and in that regard, the Managing Partner will receive the consideration to be paid the Operator under such agreement for such period.

ARTICLE VIII

PARTNER REIMBURSEMENT

Section 8.1. Agreement Controls Compensation of the Partners. Except as expressly provided in this Agreement in Section 8.4 or otherwise agreed to in writing by the Partners, no payment will be made by the Partnership to either Partner or its Affiliates for the services of either Partner or its Affiliates or any member, stockholder, director, partner or employee of either Partner or its Affiliates.

Section 8.2. Reimbursement of Organizational Expenses, and Other Partner Expenses. The Partnership shall reimburse the Partners and their Affiliates for any Organizational Expenses paid by the Partners or their Affiliates; provided, however, that the Partnership shall not reimburse any Partner for any expenses paid by such Partner in obtaining any federal, state, or local governmental permits and approvals relating to the design, construction and operation of the Generation Facility or the financing thereof which costs shall be borne solely by the Partnership, or the Operator, as the case may be.

Section 8.3. Operating Account. Except as provided in this Section 8.3, all interest which accrues on the Partnership Operating Account shall accrue to the Partnership. Therefore, the Partners desire that Partnership funds, rather than Partner funds, be used to meet the working capital needs of the Partnership if sufficient funds are available. Notwithstanding the foregoing, the Managing Partner may make working capital advances if it deems such advances reasonably necessary. Interest shall accrue on the outstanding balance of said operating advances at a non-compounded fluctuating rate per annum, adjusted monthly, equal to the long-term prime interest rate offered by major U.S. banks, from time to time, until the operating advances are repaid to the Managing Partner. The Partnership shall repay the operating advances, and all interest accrued thereon, to the Managing Partner.

Section 8.4. Managing Partner's Compensation. The Managing Partner shall receive a monthly payment (the "Management Fee"), in arrears, from the Partnership of [insert] in consideration of the Managing Partner's performance of its obligations under this Agreement. The Management Fee shall be subject to a yearly increase of _____ percent (___%) commencing on the first anniversary of this Agreement and on a compound basis, after each one (1) year period thereafter. The Management Fee shall not be reduced by reason of any payment made to the Managing Partner acting as the Operator pursuant to Section 7.6 of this Agreement. Neither this Section 8.4 nor the receipt by the Managing Partner of the Management Fee shall limit the right and authority of the Managing Partner pursuant to Section 16.2 of this Agreement; provided however, that the Management Fee may be reduced pursuant to agreement of the Partners pursuant to Section 16.2 of this Agreement.

Section 8.5. Reimbursement for Expenses For Participations on Management Committee. Each Partner shall be entitled to be reimbursed for its expenses actually and reasonably incurred in attending the meetings of the Management Committee held pursuant to Article VII of this Agreement.

ARTICLE IX

ALLOCATION OF INCOME AND LOSS; DISTRIBUTIONS

Section 9.1. Allocation of Income and Loss.

9.1.1 Net Taxable Income or Loss. After giving effect, if any, to the provisions of first, Section 9.2 and next, Section 9.1.3 of this Agreement, the Partnership's Net Taxable Income or Net Taxable Loss, as the case may be, shall be allocated to the Partners in accordance with their respective Partnership Interests.

In the event a Partner's Capital Account is disproportionate to the Partner's Partnership Interest, solely by reason of Section 9.2 of this Agreement, the Net Taxable Income or Net Taxable Loss shall be allocated among the Partners in such a way so as to bring the Partner's Capital Accounts back into parity with the respective Partner's Partnership Interest as quickly as possible.

9.1.2 Gain or Loss from Capital Transactions. After giving effect to the provisions of first, Section 9.2 and next, Section 9.1.3 of this Agreement, Gain or Loss from Capital Transactions shall be allocated to the Partners as follows:

(i) First, all Gain or Loss from Capital Transactions shall be allocated entirely to MOL or BGC, as the case may be, until the ratio that each Partner's capital account balance bears to the total Capital Account balances of the Partners is equal to said Partner's Partnership Interest; and

(ii) All remaining Gain or Loss from Capital Transactions shall be allocated to the Partners in accordance with their respective Partnership Interests.

9.1.4 General Allocation Rules.

(a) After first giving effect to the Regulatory Allocations set forth in Section 9.2 of this Agreement and except as otherwise provided in Section 9.1, each item of Partnership income, gain, deduction, loss and credit for federal income tax purposes shall be allocated to the Partners in accordance with the allocation of the corresponding item of Net Taxable Income and Net Taxable Loss.

(b) If, for federal income tax purposes, the basis to the Partnership of the Lani-Puna VI Well contributed by BGC and/or the Pipeline Easement contributed by MOL differs from fair market as set forth in Section 6.1 of this Agreement, income, gain, loss and deductions with respect to the Lani-Puna VI Well and/or the Pipeline Easement contributed by MOL shall be allocated between the Partners so as to take account of, as required or permitted by Section 704(c) of the Code, the variation between basis of the Lani-Puna VI Well and/or the Pipeline Easement to the Partnership for federal income tax purposes (determined at the time of contribution) and said fair market value. The capital accounts of the Partners shall be adjusted to reflect these allocations in accordance with Section 1.704-1(b)(2)(iv)(g) of the Treasury Regulations.

(c) If the capital accounts of the Partners are increased or decreased to reflect a revaluation of any of the Partnership Property on the Partnership's books, subsequent allocations of income, gain, loss and deduction with respect to such Property shall take account of any variation between the adjusted tax basis and book value of such Property in the same manner as under Section 704(c) of the Code.

(d) Any elections or other decisions relating to allocations made pursuant to this Section 9.1 shall be made by the Management Committee as provided in Article VII. Allocations of tax items under Section 9.1 shall not in any way affect or be taken into account in computing any Partner's capital account or right to Distributions under this Agreement.

Section 9.2. Regulatory Allocations. Notwithstanding any other provisions of this Article IX to the contrary, the following allocations (if and to the extent applicable) shall override the allocations made pursuant to Section 9.1 of this Agreement:

(a) If there is a net decrease in the Partnership's Minimum Gain during a Fiscal Year of the Partnership, the Partners shall be allocated, before any other allocation of Partnership items for such Fiscal Year is made under Section 704(b) of the Code, items of income and gain for such Fiscal Year (and, if necessary, subsequent Fiscal Years) in the amounts and proportions set forth in Section 1.704-1T(b)(4)(iv)(e) of the Treasury Regulations.

(b) If there is a net decrease in the Minimum Gain attributable to a Partner Nonrecourse Debt during a Fiscal Year of the Partnership, any Partner with a share of the Minimum Gain attributable to such Partner Nonrecourse Debt shall be allocated items of income and gain for such Fiscal Year (and, if necessary, subsequent Fiscal Years) in the amounts and proportions set forth in Section 1.704-1T(b)(4)(iv)(h)(4) of the Treasury Regulations.

(c) Except as provided in Subsections 9.2(a) and (b) above, if a Partner unexpectedly receives an adjustment, allocation or distribution described in clause (4), (5) or (6) of Section 1.704-1(b)(2)(ii)(d) of the Treasury Regulations, such Partner shall be allocated items of income and gain (consisting of a pro rata portion of each item of Partnership income, including gross income and gain, for the Fiscal Year of the Partnership in which such adjustment, allocation or distribution occurs) in an amount and manner sufficient to eliminate as quickly as possible, any Adjusted Capital Account Deficit in said Partner's capital account created or increased by such adjustment, allocation, or distribution. This subsection 9.2(c) is intended to constitute a "qualified income offset" within the meaning of Section 1.704-1(b)(2)(ii)(d) of the Treasury Regulations and shall be interpreted consistently therewith.

(d) Any item of Partnership loss, deduction or Code Section 705(a)(2)(B) expenditure that is attributable to a Partner Nonrecourse Debt shall be allocated to the Partner or Partners bearing the economic risk of loss for such debt in the amounts and proportions set forth in Section 1.704-1T(b)(4)(iv)(h)(2) of the Treasury Regulations.

(e) To the extent that an allocation of Net Taxable Loss to a Partner which is otherwise required by Subsection 9.1.1 would create or increase an Adjusted Capital Account Deficit for such Partner, such Net Taxable

Losses shall be reallocated to the other Partners in proportion to their respective shares of the Net Taxable Losses for the Fiscal Year (to the extent that such reallocation does not create or increase an Adjusted Capital Account Deficit for any such other Partner).

(f) The Regulatory Allocations set forth in Subsections 9.2(a) through (e) above are designed to comply with certain requirements of the Treasury Regulations promulgated under Section 704(b) of the Code and may not be consistent with the manner in which the Partners intend to make Partnership Distributions. In such an event, and notwithstanding the provisions of Section 9.1 of this Agreement, other amounts of income, gain, loss and deduction of the Partnership shall be allocated in such a manner as to prevent the Regulatory Allocations from distorting the manner in which the Partnership Distributions will be made to the Partners pursuant to Section 9.3 of this Agreement. In general, the Partners anticipate that this will be accomplished by specially allocating other Net Taxable Income, Net Taxable Loss and items of income, gain, loss and deduction among the Partners, so that the net amount of the Regulatory Allocations and special allocations to each Partner is zero.

Section 9.3. Nonliquidating Distributions.

(a) Subject to the unanimous vote of the Management Committee, the Total Distributable Income for each calendar month shall be distributed to the Partners in accordance with their respective Partnership Interests.

(b) All Net Extraordinary Cash Flow received prior to Liquidation of the Partnership shall be applied to the Partnership's Reserve Fund, unless the Partners mutually agree in writing to make Nonliquidating Distributions of Net Extraordinary Cash Flow. Nonliquidating Distributions of Net Extraordinary Cash Flow, if any, shall be distributed to the Trustees in accordance with their respective Partnership Interests.

Section 9.4. Liquidating Distributions.

(a) Upon Liquidation of the Partnership (or any Partner's interest in the Partnership), Liquidating Distributions to the Partners shall be made in accordance with the respective positive capital account balances of the Partners as determined after taking into account all capital account adjustments for the Partnership's Fiscal Year during which such Liquidation occurs

(other than those made pursuant to this Section 9.4 or pursuant to any obligation of a Partner to restore a deficit balance in its capital account) by the end of such Fiscal Year or, if later, within ninety (90) days after the date of such Liquidation. Such Liquidating Distributions shall be made in the order of priority set forth in Section 15.3 of this Agreement.

(b) If any Partnership assets are to be distributed in kind under this Section 9.4, such assets shall be distributed on the basis of the fair market value thereof, as agreed to by the Partners in accordance with Section 17.2 of this Agreement. The difference, if any, between the book value of any such asset on the books of the Partnership and its fair market value shall, for purposes of this Agreement, be treated as gain or loss realized by the Partnership in Liquidation and shall be allocated among the Partners in accordance with this Article IX.

Section 9.5. Reserves Prior to Distributions. Prior to the making of any Nonliquidating Distributions, the Partnership's Gross Revenues in each calendar month shall be applied to establish and maintain reasonable reserves for Capital Expenditures and for working capital (the "Reserve Fund") necessary or desirable, in the Partners' judgment, for the operation of the Partnership Business, as determined by the Management Committee. Notwithstanding the foregoing, all Net Extraordinary Cash Flow shall be applied to the Reserve Fund unless otherwise agreed by the Partners.

Section 9.6. No Priority. Except as otherwise agreed to by the Partners, in connection with any Distribution, whether upon winding up of the Partnership or otherwise and whether or not it shall constitute a return of capital, no Partner shall have the right to demand or receive property other than cash.

ARTICLE X

FISCAL AFFAIRS

Section 10.1. Books and Records.

(a) The Managing Partner shall maintain, or cause to be maintained, true and accurate books and records of account of the transactions of the Partnership,

including a capital account for each Partner, in accordance with generally accepted accounting principles consistently applied.

(b) The Managing Partner shall at all times keep the following records at the principal office of the Partnership;

(i) A current list of the full name and last known address of each Partner separately identifying the Partners in alphabetical order;

(ii) A copy of the Partnership Registration Statement, together with copies of any power of attorney pursuant to which any Certificate has been executed;

(iii) Copies of the Partnership's federal, state and local income tax returns and reports, if any, for the three (3) most recent years;

(iv) A copy of this Agreement and the Operations Agreement, including any amendments hereto;

(v) Copies of the Partnership's financial statements for the three (3) most recent years; and

(vi) Copies of the Partnership's books and records for the three (3) most recent years.

(c) All of the records referred to in Subsection 10.1(b) above shall be open to inspection and examination by the Partners or their duly authorized representatives at all reasonable times during normal business hours. Each Partner shall be provided with a copy of any such record upon request, but at the expense of the requesting Partner.

(d) Notwithstanding the above, all of these duties may be delegated to the Operator upon the unanimous consent of the Management Committee and in such case, the Managing Partner's Management Fee shall be adjusted accordingly.

Section 10.2. Bank Accounts. All funds of the Partnership shall be deposited in its name in such checking and savings accounts, certificates of deposit, United States government obligations or other short-term interest bearing accounts as shall be selected by the Managing

Partner in its discretion. Withdrawals therefrom shall be made upon such signature or signatures as the Management Committee may decide.

Section 10.3. Financial and Other Reports. The Managing Partner shall cause an independent certified public accountant selected by the Managing Committee to prepare audited financial statements (i.e., statements of assets and liabilities and a statement of revenues and expenses) and Partnership information necessary for the preparation of the Partners' federal and State of Hawaii income tax returns. Copies of such statements and information shall be distributed to each Partner prior to March 1st following the close of each Fiscal Year. Either Partner may request that such audited financial statements be further audited by an independent certified public accountant selected by such Partner. The Partner requesting the additional audit shall bear the expense thereof; provided, however, that notwithstanding the foregoing, the Partnership shall bear the expense of any additional audit requested by such Partner if such audit results in an adjustment of ten percent (10%) or greater of any material item set forth in the financial statements. Notwithstanding anything contained in Section 10.1 of this Agreement, all such financial statements shall be kept for a period of not less than six (6) years in the principal office of the Partnership, and shall be open to inspection and examination by the Partners or their duly authorized representatives at all reasonable times during normal business hours.

Section 10.4. Tax Returns and Other Governmental Reports. The Managing Partner shall cause income tax returns for the Partnership to be prepared by an independent certified public accountant selected by the Management Committee. Copies of such returns shall be submitted to each Partner for approval no later than thirty (30) days prior to the required filing date for such return. Each Partner shall review and approve or disapprove, in writing, such returns within twenty-one (21) days after receiving the same, provided, however, if the Managing Partner shall not receive notice of any Partner's approval or disapproval of any return in the applicable time period, then for purposes of this Agreement and the Managing Partner's obligations hereunder, said return shall be deemed approved by the nonresponsive Partner. Following approval by the Partners, the Managing Partner shall file such returns with the appropriate government authorities within five (5) business days, but in any event, in such a manner so as not to cause any applicable

filing deadline to be missed. The Managing Partner shall prepare or cause to be prepared and timely filed with appropriate federal, state and local regulatory and administrative bodies, all reports required by such bodies under then current applicable laws, rules and regulations, including but not limited to, filings required under the UPA. Such reports shall be prepared on the accounting or reporting basis required by such regulatory and administrative bodies. Each Partner shall be provided with a copy of all such reports. Notwithstanding anything to the contrary contained in Section 10.1 above, all such returns and reports shall be kept in the principal office of the Partnership for a period of six (6) years, and shall be open to inspection and examination by the Partners or their duly authorized representatives at all reasonable times during normal business hours.

Section 10.5. Federal Tax Matters; Method of Accounting. The Partnership shall keep its books for federal income tax purposes in accordance with the following provisions:

(a) The classification, realization and recognition of income, gain, loss, deduction and other items shall be done in accordance with the method of accounting chosen by the Partners; and

(b) The Managing Partner may cause the Partnership to make all elections required or permitted to be made for federal income tax purposes, only upon the prior approval of the Management Committee.

ARTICLE XI

LIMITATION OF AUTHORITY OF THE MANAGING PARTNER

Section 11.1. Rights and Duties Generally. The right to manage and conduct the Partnership Business, subject to those decisions delegated to the Management Committee pursuant to the provisions of Article VII of this Agreement, and the delegation to the Operator under the Operations Agreement, shall be vested in the Managing Partner. The Managing Partner shall be primarily responsible to guide and direct the Partnership to achieve its purposes and shall devote such time, skill and attention to the business and affairs of the Partnership as may be reasonably required or calculated to best achieve its goals. The Managing Partner shall not be liable to the

other Partners for any errors in business judgment except for gross negligence or willful dereliction of its duties or for fraud. Notwithstanding the above, the Partners, through the Management Committee, shall appoint an Operator pursuant to the Operations Agreement and in connection therewith, and subject to the provisions of Section 11.2, Article VII and Article X of this Agreement, the Managing Partner shall not be relieved of any duty, obligation or responsibility, nor have any authority to, act on behalf of the Partnership with respect to the matters included in the Operations Agreement.

Section 11.2 Rights and Powers of the Managing Partner If There is No Operator.

11.2.1 General Authority. In the event there is no Operator acting on behalf of the Partnership, or if the Operator is in breach under the Operations Agreement and not performing its duties thereunder, the Managing Partner shall have all authority, rights and powers necessary and desirable to perform the Operator's duties under the Operations Agreement on behalf of the Partnership as if the Managing Partner were the Operator thereunder and those necessary to the operation and management of the Partnership Business which, by way of illustration and not by way of limitation shall include the authority, right and power, in the Managing Partner's discretion:

(a) To acquire and hold the Partnership Property upon such terms as the Managing Partner deems to be in the best interests of the Partnership;

(b) To cause the Partnership to comply with all applicable laws in connection with the ownership, management and operation of the Partnership Property;

(c) To apply subject to the Management Committee's authority, the proceeds from any loans or refinancing of loans, including, but not limited to, the Construction Financing and the Permanent Financing, to the repayment of existing loans, to the funding of the Reserve Fund, to Distributions, or for any other Partnership purposes;

(d) To acquire and enter into any contract of insurance or bonding agreement which the Managing Partner deems to be necessary or desirable for the

protection of the Partnership and the Partners, for the conservation of any of the Partnership Property, or for any purpose convenient or beneficial to the Partnership;

(e) To employ or retain Persons in the operation and management of the Partnership Business other than the Operator;

(f) In addition to the contracts and agreements described above, to enter into any and all other contracts and agreements, containing such terms as the Managing Partner may determine to be desirable, in its discretion, pertaining to the acquisition, operation and management of the Partnership Property, or any portion thereof, or the Partnership Business; and

(g) To execute, acknowledge and deliver any and all instruments to effectuate the foregoing, and to take all such action in connection therewith as the Managing Partner shall deem necessary or appropriate, in its discretion.

Section 11.3. No Voluntary Dissolution of the Managing Partner. The Managing Partner shall not voluntarily dissolve without the prior written consent of the other Partners.

ARTICLE XII

DEFAULTS; REMEDIES

Section 12.1. Event of Default. Each of the following circumstances shall constitute an "Event of Default" for purposes of this Agreement:

(a) If either Partner shall fail or refuse to make any Capital Contributions to the Partnership other than an Agreed Additional Contribution pursuant to Article VI of this Agreement which it is required to make pursuant to this Agreement, or to make other payments as required by the Agreement within thirty (30) days after written demand by the other Partner for such payment; or

(b) If either Partner shall fail to perform or observe any covenant or condition reasonably capable of observance or performance as required under this Agreement within thirty (30) days after written demand by the other Partner for such performance or observance provided, however, there shall exist no Event of Default

if such default cannot be practicably cured within said thirty (30) day period, and the defaulting Partner shall have agreed in writing to proceed diligently to cure such default and such undertaking shall be reasonably acceptable to the nondefaulting Partner provided, further, that said default shall, in any event, be cured within three hundred sixty-five (365) days of the defaulting Partner's receipt of the original written demand; or

(c) If a decree or order is rendered by a court having jurisdiction (i) adjudging a Partner a bankrupt or insolvent, or (ii) approving as properly filed a petition seeking reorganization, readjustment, arrangement, composition or similar relief for a Partner under the federal bankruptcy laws or any other similar applicable law or practice, and if such decree or order referred to in this clause (ii) shall have continued undischarged and unstayed for a period of thirty (30) days; or

(d) If a decree or order is rendered by a court having jurisdiction (i) for the appointment of a receiver or liquidator or trustee or assignee in bankruptcy or insolvency of either Partner or a substantial part of the property of either Partner, or for the winding up or liquidation of its affairs, and such decree or order shall have remained in force undischarged and unstayed for a period of thirty (30) days, or (ii) for the sequestration or attachment of any property of either Partner without its return to the possession of either Partner or its release from such sequestration or attachment within thirty (30) days thereafter; or

(e) If any Partner (i) institutes proceedings to be adjudicated a voluntary bankrupt or an insolvent, or (ii) consents to the filing of a bankruptcy proceeding against it, or (iii) files a petition or answer or consent seeking reorganization, readjustment, arrangement, composition or similar relief under federal bankruptcy laws or any other similar applicable law or practice, or (iv) consents to the filing of any such petition, or to the appointment of a receiver or liquidator or trustee or assignee in bankruptcy or insolvency of it or of a substantial part of its or his property, or (v) makes an assignment for the benefit of creditors, or (vi) is unable to or admits in writing its inability to pay its debts generally as they become due, or (vii) takes corporate action in furtherance of any of the aforesaid purposes.

Section 12.2. Remedies. Subject to the limitations set forth in this subsection, if an Event of

Default shall have occurred, the nondefaulting Partner may, at its option, elect to:

(a) Advance funds sufficient to pay the obligations of the defaulting Partner or to procure the performance by third parties of services which are required to be rendered by the defaulting Partner hereunder, in either of which cases the Partner advancing the same shall be reimbursed by the defaulting Partner for sums advanced, together with interest at the rate of one per cent (1%) per month thereon commencing on the date of such advancement, prior to the distribution of any funds to the defaulting Partner; and the defaulting Partner shall not be relieved of its obligation to bear its proportionate share of the Net Taxable Losses, if any, of the Partnership.

(b) Purchase the defaulting Partner's Partnership Interest. Such right to purchase shall be exercised by giving not less than thirty (30) days' written notice of such election to the defaulting Partner at any time after such default and before the defaulting Partner shall have cured such default. The purchase price upon such exercise shall be equal to ninety percent (90%) of the fair market value of the defaulting Partner's Partnership Interest as determined in accordance with Section 17.1 of this Agreement as of the last day of the month in which such notice of exercise shall be given (the "Valuation Date" for purposes of this Section 12.2 plus the balance (if any) of any loan (together with accrued and unpaid interest thereon) owed on the Valuation Date by the Partnership to the defaulting Partner. The closing terms shall be as set forth in Article XVII of this Agreement.

(c) Bring an action against the defaulting Partner for payment of the capital required to be contributed by such Partner, in which event the defaulting Partner shall be required to pay reasonable attorney's fees and court costs incurred by the other Partners in bringing such action and interest to the Partnership at the rate of one percent (1%) per month on the unpaid Capital Contribution from the date of the Event of Default.

(d) The nondefaulting Partner may terminate the Partnership by giving at least thirty (30) days' written notice to the defaulting Partner that it intends to dissolve the Partnership. Such dissolution and liquidation shall be carried out in the manner prescribed in Article XV of this Agreement, it being understood that

upon such termination the Partner effecting such termination (the "Liquidating Partner") shall have the right to encumber, sell and convey the Property in the name of the Partnership, or otherwise, at such reasonable prices and upon such terms as may be justified by the existing market conditions which the Liquidating Partner may determine from time to time to be in the best interests of the Partnership.

(e) Bring a proceeding in equity against the defaulting Partner in order to obtain an injunction or other equitable relief, it being acknowledged by each of the Partners that monetary damages may be an inadequate remedy for default or breach of this Agreement.

(f) Bring an action at law against the defaulting Partner in order to receive damages on behalf of the Partnership or the defaulting Partner, as may be permitted.

Notwithstanding the foregoing, upon the occurrence of an Event of Default as described in Sections 12.1(c) and 12.1(d) of this Agreement, the nondefaulting Partner shall not be entitled to assert or enforce those remedies set forth in Sections 12.2(a), 12.2(b), 12.2(c) and 12.2(d) of this Agreement, but shall be entitled to all remedies that may be set forth in Sections 12.2(e), 12.2(f) or to which said nondefaulting Partner may otherwise be entitled.

Section 12.3. Cumulative Remedies. The remedies provided in this Article XII upon an Event of Default are not intended to be exclusive but are cumulative and in addition to any other remedies which may at any time be available. Without limiting the generality of the foregoing, if a Partner shall at any time violate or attempt to violate, by failing to make (or making) the transfer of its Partnership Interest required (or prohibited) by the provisions of this Agreement, then the other Partners shall be entitled to a decree of specific performance or an order restraining and enjoining such breach, and the defaulting Partner may not plead as a defense thereto that there would be an adequate remedy at law, it being recognized and agreed that the injury and damage resulting from such a violation would be impossible to measure monetarily.

ARTICLE XIII

ARBITRATION

Notwithstanding the provisions of Section 19.11 of this Agreement, in the event of a deadlock vote on any matter submitted to the Management Committee, other than those matters described in Section 7.2.4(a - h) hereof and in compliance with said Section 7.2.4, such matter shall be settled exclusively by binding arbitration under the commercial rules of the American Arbitrators Association ("AAA") then in force. Such arbitration may be initiated by any Management Committee member by serving a written demand on the other party stating the substance of the matter and the contention of the party requesting arbitration. AAA shall appoint a single neutral arbitrator who shall be a fit and impartial person and whose decision shall be the final decision on such matter submitted to the Management Committee. The fees and costs of the arbitrator and related expenses of the arbitrator shall be borne by the Partnership.

[ARTICLE XIV INTENTIONALLY OMITTED]

ARTICLE XV

DISSOLUTION AND TERMINATION OF THE PARTNERSHIP

Section 15.1. Events of Dissolution. The Partnership shall be dissolved upon the first to occur of any of the following:

15.1.1 Bankruptcy, Insolvency or Dissolution of Either Partner. The bankruptcy, insolvency or dissolution of either Partner. For purposes of this Subsection 15.1.1, the terms "bankruptcy or insolvency" and "dissolution" shall have the meanings set forth below.

(a) "Bankruptcy or Insolvency" shall be deemed to have occurred if either Partner files in any court pursuant to any statute of the United States or any state, a petition in bankruptcy or insolvency, or files for reorganization or for the appointment of a receiver or trustee, of all or a material portion of either Partner's property, of if either Partner makes an assignment for the benefit of creditors, admits in writing its inability to pay its debts as they fall due or seeks consents to or

acquiesces in the appointment of a trustee, receiver or liquidator of any material portion of its property. If there shall be filed against either Partner in any court pursuant to any statute of the United States or any state, a petition in bankruptcy or insolvency, or for reorganization, or for appointment of a receiver or trustee, of all or a substantial portion of either Partner's property, and within ninety (90) days after the commencement of any such proceeding against either Partner, such petition shall not have been dismissed (or satisfactory evidence that either Partner is diligently contesting such petition shall not have been received by the other Partner, provided the Partner is not otherwise in default hereunder), then the potentially bankrupt or insolvent such Partner shall be bankrupt or insolvent for purposes of this Agreement. In addition, if the whole or any portion of the Partnership Interest of either Partner is subject to levy or attachment and such levy or attachment is not released or discharged within sixty (60) days, such Partner shall be deemed "bankrupt or insolvent" for purposes of this Agreement.

(b) "Dissolution" shall be deemed to have occurred upon the earlier of the date of adoption of a plan of liquidation by either Partner or the effective date of dissolution, in accordance with applicable statutory law.

15.1.2. Sale of Partnership Property. The sale of all or substantially all of the Partnership Property and the disposition of the proceeds therefrom.

15.1.3 By Agreement. The Partners agree in writing to dissolve the Partnership, including but not limited to, in the event the Partners cannot obtain an Operator.

Section 15.2. Effective Date of Dissolution. The dissolution of the Partnership shall be effective on the day the event giving rise to the dissolution occurs, but the Partnership shall not terminate until all of its affairs have been wound up and its assets distributed as provided in this Article XV.

Section 15.3. Procedures Upon Dissolution. Upon a dissolution of the Partnership for any reason, the Managing Partner shall proceed to liquidate the assets of the Partnership as promptly as is consistent with obtaining the fair value thereof, and, after payment of all expenses related to the Liquidation and, except as otherwise

provided by law, shall apply and distribute the proceeds therefrom in the following order:

(a) First, to the payment of creditors of the Partnership in the order of priority provided by law, but excluding (i) Partners and (ii) secured creditors whose obligations are to be assumed or otherwise transferred on the Liquidation of Partnership assets.

(b) Second, to the creation of any reserves which the Managing Partner may reasonably determine to be necessary to complete such dissolution and Liquidation and which are approved by the Management Committee.

(c) Third, to the Partners, pro rata, in an amount equal to the unpaid remainder, if any, of their respective reimbursements described in Section 8.2 of this Agreement.

(d) Fourth, to the Partners, pro rata, in accordance with (and to the extent of) their respective positive capital account balance pursuant to Subsection 9.4 of this Agreement.

(e) Fifth, to the Partners, pro rata, and in accordance with their respective Partnership Interests.

ARTICLE XVI

COMPETITIVE TRANSACTIONS

Section 16.1. Limitation on Other Business. The Partners and the Affiliates of either shall have the absolute right to engage in or possess, independently of the Partnership and the other Partners, any interest in any business, venture or other activity of every nature and description whatsoever, provided, however neither Partner shall engage in, invest in or otherwise be associated or affiliated with any business, venture or enterprise operated in the County of Hawaii, State of Hawaii similar to or competitive with the Partnership Business (other than the drilling for Geothermal Resources for its own account) or any part thereof.

Section 16.2. Contracts with Managing Partner or Its Affiliates. The Managing Partner shall have the right, on behalf of the Partnership, to engage the services of (a) the Managing Partner or any Affiliate of the Managing Partner in separate capacities for such fees and

upon such other terms as the Managing Partner may determine, subject to the prior written consent of the Management Committee or (b) the other Partner or any Affiliate of such Partner in separate capacities for such fees and upon such other terms as the Managing Partner may determine; provided, however, that the fees payable for such services shall be competitive with fees charged by independent third parties rendering commensurate services in the State of Hawaii and shall otherwise be on competitive terms; and, provided, further that to the extent the Managing Partner, on behalf of the Partnership, so contracts for the performance of services pursuant to this Section 16.2 for which it is then receiving the Management Fee under Section 8.4 of this Agreement, the Management Fee shall be reduced in an amount agreed to in good faith by the Partners. If any such Person performs any such services for the Partnership, neither the Partnership nor either Partner shall have any right in or to any income or profits derived by such Person from the employment.

ARTICLE XVII

PURCHASE PRICE OF PARTNERSHIP INTEREST

Section 17.1. Purchase Price. (a) The price to be paid for the purchase of a Partnership Interest pursuant to this Agreement shall be the fair market value of such Partnership interest determined as follows:

(i) the fair market value of all of the Partnership Property shall be determined as provided in Section 17.2 Agreement;

(ii) Each item of Partnership Property shall be deemed to have been sold on the Valuation Date (as defined in Section 17.2 of this Agreement) for its respective fair market value so determined and, within ten (10) days after such determination, the accountants of the Partnership shall determine the gains or losses of the Partnership which would have resulted from such deemed sales;

(iii) Upon determination of such deemed gains or losses, and solely for purposes of this Section 17.1 the capital accounts of the Partners shall be adjusted as of the Valuation Date in accordance with their respective interests to reflect the allocable deemed gains or losses; and

(iv) The balance in each Partner's capital account after such adjustment shall be deemed to be the fair market value of such Partner's Partnership Interest.

(b) Immediately upon the determination of the fair market value of the Partner's Partnership Interest by the accountants of the Partnership in accordance with the foregoing, said accountants shall notify each of the Partners thereof, which notice shall state in such accountant's opinion the Partnership's maximum exposure on contingent liabilities not adequately covered by insurance and set forth such Partner's maximum share of such exposure.

Section 17.2. Valuation of Partnership Assets. Whenever required by this Agreement, the determination of fair market values of items of Partnership Property shall be made as follows:

(a) Within ten (10) business days after the date on which a Partner gives notice of exercise of right to purchase pursuant to this Agreement (the "Notice Date"), the Partner giving such notice ("Initiating Partner") shall submit to the defaulting Partner a fair market value balance sheet setting forth its good faith estimate of the fair market value of each item of the Partnership Property. Within twenty (20) business days after receipt of said balance sheet, the defaulting Partner receiving such balance sheet shall submit to the Initiating Partner a similar balance sheet setting forth its good faith estimate of the fair market value of each item of Partnership Property. As to each such item for which the submitted fair market values vary by five percent (5%) or less, the average of the two shall be controlling. As to each such item for which submitted values vary by more than five percent (5%), such value shall be determined by appraisal pursuant to clause (b) of this Section 17.2. If a Partner fails to submit a fair market value balance sheet pursuant to this clause (a) within the applicable time period, the procedure set forth in clause (b) of this Section 17.2 shall be applied as to all items of the Partnership Property.

(b) (i) Except as otherwise agreed by the Partners, if appraisal of any item of Partnership Property is required pursuant to clause (a) of this Section 17.2, then within thirty (30) days after the notice date, each Partner shall appoint an appraiser who shall be an engineer or geologist or other professional experienced in

geothermal exploration and development, and who has experience valuing geothermal properties and equipment such as the Generation Facility.

(ii) If the fair market values of any such item appraised by said appraisers vary by five percent (5%) or less, the average of the two shall be controlling. If the fair market values of any such item appraised by said appraisers vary by more than five percent (5%), said appraisers, within ten (10) days of the submission of the last appraisal, shall appoint a third appraiser meeting the same requirements set forth in clause (b)(i) of this Section 17.2. Said third appraiser shall, within thirty (30) days of his appointment, appraise each such item for which a value has not been established as provided above and submit his appraisal report to each of the Partners. The value determined by the third appraiser for each such asset shall be controlling unless it is less than that set forth in the lower appraisal previously obtained, in which case the value set forth in said lower appraisal shall be controlling, or unless it is greater than that set forth in the higher appraisal previously obtained, in which case the value set forth in said higher appraisal shall be controlling.

(iii) If the Partners fail to appoint an appraiser or if an appraiser or appraisers appointed by the Partners fails to submit any one or more of his appraisals within the required period in accordance with the foregoing, the appraisal submitted by one appraiser shall be controlling, but only as to those items of Partnership Property for which the other appraiser, if any, failed to submit an appraisal.

(iv) The costs of each appraiser appointed by a Partner under this clause (b) of this Section 18.2 shall be borne by the appointing Partner. The cost of the third appraiser as well as all other costs of the appraisal shall be borne by the Partnership. Each Partner shall bear its own attorneys' fees.

(v) All valuations by the Partners or by an appraiser under this Section 17.2 shall be made as of the Valuation Date.

Section 17.3. Restriction on Distributions. If, pursuant to this Agreement, a defaulting Partner shall become obligated to sell his Partnership Interest and the Initiating Partner shall become obligated to purchase such

interest, then from and after the Valuation Date, no further Distributions shall be made to the defaulting Partner, and from and after such Valuation Date, the Partnership Interest of the defaulting Partner shall be maintained for the account of whichever Partner becomes the purchasing Partner.

Section 17.4. Closing Date. The closing of any purchase of a Partner's Partnership Interest by the other Partners pursuant to this Agreement above shall be held at the principal office of the Partnership on such date as the Partners may agree, but not later than the 30th day after the date on which the accountants of the Partnership shall give the Partners notice of their determination of the fair market value of the Partnership Interest of the defaulting Partner in the Partnership pursuant to Section 17.1 of this Agreement.

Section 17.5. Property To Be Conveyed. The defaulting Partner shall transfer to the purchasing Partner the entire Partnership Interest of the defaulting Partner (including, without limitation, any rights of the defaulting Partner to receive (a) repayment of any loans made by it to the Partnership, with accrued and unpaid interest thereon, and (b) any Distributions), free and clear of all liens, security interests and competing claims, and shall deliver to the purchasing Partner such instruments of transfer (including quitclaim deeds) with respect to the Partnership Property and such evidence of due authorization, execution and delivery and of the absence of any liens, security interests or competing claims as the purchasing Partner shall reasonably request. The defaulting Partner shall be responsible for any stamp, recording and similar transactional taxes payable upon such transfer.

Section 17.6. Form of Payment; Indemnity. At the closing, the purchasing Partner shall pay the purchase price in full by certified or official bank check payable to the order of the defaulting Partner. The purchasing Partner shall also execute and deliver to the defaulting Partner an agreement to indemnify, defend and hold harmless the defaulting Partner against recourse obligations and liabilities of the Partnership and to use its best efforts to obtain the release of the defaulting Partner from any liabilities, direct or contingent, for the payment of any obligation of the Partnership. Such indemnity shall be applicable to all obligations and liabilities of the Partnership, excluding, however, obligations and liabilities which the defaulting Partner knew of, or should have known of, and did not disclose to the purchasing

Partner at or before the time of the purchase and of which the purchasing Partner could not be reasonably expected to have had knowledge.

ARTICLE XVIII

INDEMNIFICATION

Section 18.1. Indemnification by Each Partner.

(a) Each Partner hereby indemnifies and agrees to hold harmless the Partnership and, to the extent damaged apart from the damage to the Partnership, the other Partner, from and against costs, expenses, liabilities, damages, claims, demands, actions, suits and proceedings, which shall arise from the indemnifying Partner's doing any act or failure to do any act which (1) constitutes gross negligence or willful misconduct in the Partner's discharge of its duties under this Agreement, or (2) exceeds the scope of the indemnifying Partner's authority under this Agreement.

(b) Failure to indemnity as required under this Article XVIII shall be an Event of Default under Article XII with respect to the indemnifying Partner.

Section 18.2. Cash and Expenses. Any Indemnification called for or authorized under this Article XVIII shall include the payment of reasonable attorney's fees or other expenses (not limited to taxable costs) incurred in settling or defending any such claims, demands, threatened actions or finally adjudicated suits or proceedings.

Section 18.03. Scope of Indemnities. None of the indemnities provided for in this Article XVIII shall be deemed to apply to or bind or inure to the benefit of any persons or entities other than the Partners, or to indemnify a Partner for damages to the Partnership or other Partner arising from an event constituting an Event of Default under this Agreement. Nothing in this Agreement shall be deemed to create any right in anyone not a party hereto. These indemnity provisions contained in Article XVIII shall survive the termination of this Agreement.

ARTICLE XIX

MISCELLANEOUS

Section 19.1. Amendment by the Partners. This Agreement may be amended by written agreement of the Partners.

Section 19.2. Notices. All notices required to be given pursuant to this Agreement to a Partner or the Partnership shall be either by personal delivery or be certified or registered mail addressed to the party at such address as registered with the Managing Partner from time to time. Notice shall be deemed given on the date of delivery or, in the case of notice given by mail, on the day after that on which the same is deposited in the united States mail, addressed as above provided, with postage thereon fully prepaid, if mailed in Honolulu, Hawaii, or on the second day after mailing if mailed elsewhere.

Section 19.3. Benefit. Except as is herein otherwise specifically stated, this Agreement shall bind and inure to the benefit of the parties to this Agreement, their successors in interest and permitted assigns.

Section 19.4. Severability. If any provisions of this Agreement or the application thereof to any person or circumstances shall be invalid or unenforceable to any extent, the remainder of this Agreement and the application of such provisions to other persons or circumstances shall not be affected thereby.

Section 19.5. No Waiver. The failure of any party hereto to seek redress for violation of or to insist upon the strict performance of any covenant or condition of this Agreement shall not prevent a subsequent act, which would have originally constituted a violation, from having the effect of an original violation.

Section 19.6. Headings. The headings in this Agreement are inserted for convenience and identification only and are in no way intended to describe, interpret, define or limit the scope, extent or intent of this Agreement or any provision hereof.

Section 19.7. Waiver. The rights and remedies provided by this Agreement are cumulative and not the use of any one right or remedy by either party shall not preclude or waive its right to use any or all other remedies.

Said rights and remedies are given in addition to any other right the parties have by law, statute, ordinance or otherwise.

Section 19.8. Additional Documents. The Partners shall execute all other documents which may be required or appropriate to carry out the purposes of this Agreement.

Section 19.9. Counterparts. This Agreement may be executed in any number of counterparts with the same effect as if all parties hereto had signed the same document, notwithstanding that all of the parties are not signatories to the original or the same counterpart. All counterparts shall be construed together and shall constitute one and the same Agreement.

Section 19.10. Governing Law; Jurisdiction. This Agreement shall be construed and enforced in accordance with the laws of the State of Hawaii. To the extent not inconsistent with Section 19.11 hereof, the Partners hereby submit themselves to the nonexclusive jurisdiction of the United States District Court for the District of Hawaii and the Circuit Courts of the First Circuit, State of Hawaii with respect to any matter arising out of this Agreement or the subject matter hereof.

Section 19.11. Arbitration. All disputes with respect to the terms, conditions of this Agreement and the performance of the Partners hereunder shall be referred to arbitration as provided in this Section 19.11. Either Partner may commence such arbitration by notice (the "Original Notice") to the other Partner which Original Notice shall name an arbitrator. Within fifteen (15) days following the Original Notice, the Partner receiving such notice may designate a second arbitrator by notice (the "Response Notice") to such Partner, and the arbitrators designated in the Original Notice and the Response Notice shall designate a third arbitrator; provided, however, that if the Partner receiving the Original Notice shall not send a Response Notice within such 15-day period, then the arbitration shall proceed before a single arbitrator, who shall be the arbitrator designated in the Original Notice; and provided further that if two arbitrators shall be designated but shall not agree on a third arbitrator within fifteen (15) days following the Response Notice, then any party involved in such dispute may petition the United States District Judge for the District of Hawaii then senior in service to designate such third arbitrator. The arbitrators shall evaluate the issues presented and in

this regard each party shall grant each such arbitrator access to all information in its possession with respect to the Partnership Business, Partnership Property and the books and records of the Partnership. The decision of any two such arbitrators (or if there is only one arbitrator, such arbitrator) shall be final and binding on all parties involved in the dispute. The costs and expenses of the arbitration shall be borne equally by the Partner sending the Original Notice on the one hand and the Partner receiving the Original Notice on the other.

IN WITNESS WHEREOF, the Partners have executed this Agreement as of the day and year first above written.

MORGAN OIL, LTD.

By _____
Its _____

General Partner

BARNWELL GEOTHERMAL CORPORATION

By _____
Its _____

General Partner

EXHIBIT "G"

LIMITED PARTNERSHIP AGREEMENT
OF
_____ LIMITED PARTNERSHIP
BETWEEN
MORGAN OIL, LTD.,
AS GENERAL PARTNER,
AND
BARNWELL GEOTHERMAL CORPORATION,
AS LIMITED PARTNER

WJ

LIMITED PARTNERSHIP AGREEMENT

THIS LIMITED PARTNERSHIP AGREEMENT is entered into this _____ day of _____, 1991 between MORGAN OIL, LTD., a Kentucky corporation authorized to do business in Hawaii ("MOL"), as the general partner, and BARNWELL GEOTHERMAL CORPORATION, a Delaware corporation authorized to do business in Hawaii ("BGC"), as the limited partner.

W I T N E S S E T H:

WHEREAS, MOL and BGC desire to form a Hawaii limited partnership for the purpose of designing, constructing and operating an electrical generation facility as contemplated by that certain Geothermal Development Agreement dated as of March 18, 1991 by and between MOL and BGC (the "Development Agreement");

NOW, THEREFORE, in consideration of the mutual covenants contained herein and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, MOL and BGC agree as follows:

ARTICLE I

DEFINITIONS

In addition to terms defined elsewhere in this Agreement, the following terms have the following meanings for purposes of this Agreement:

"Adjusted Capital Account Deficit" means, with respect to any Partner, the deficit balance, if any, in such Partner's capital account as of the end of the relevant Fiscal Year, after giving effect to the following adjustments:

(a) Credit to such capital account an amount equal to the sum of (i) any amount such Partner is obligated to restore to any deficit balance in its capital account upon liquidation of the Partnership, as determined pursuant to Section 1.704-1(b)(2)(ii)(c) of the Treasury Regulations, (ii) such Partner's share of the Partnership's Minimum Gain, as determined pursuant to Section

1.704-1T(b)(4)(iv)(f) of the Treasury Regulations, and (iii) such Partner's share of the Minimum Gain attributable to Partner Nonrecourse Debt, as determined pursuant to Section 1.704-1T(b)(4)(iv)(h)(5) of the Treasury Regulations; and

(b) Debit to such capital account the items described in clauses (4), (5), and (6) of Section 1.704-1(b)(2)(ii)(d) of the Treasury Regulations.

The foregoing definition of Adjusted Capital Account Deficit is intended to comply with the provisions of Section 1.704-1(b)(2)(ii)(d) of the Treasury Regulations and shall be interpreted consistently therewith.

"Affiliate" means any Person related to another Person by any degree of common ownership, management or control and any officer, director, partner, agent or employee of such Person.

"Agreement" means this Limited Partnership Agreement, including all amendments hereto.

"Area of Mutual Interest" means (a) the area under which the mineral rights have been conveyed under the State Geothermal Lease, covering approximately 769 acres in the Puna District of the County of Hawaii as more particularly described in the State Geothermal Lease and upon which a geothermal well or wells will be drilled pursuant to the Development Agreement, (b) any area producing Geothermal Resources that are either (1) originally explored through wells drilled on the Leased Lands, or (2) produced through holes drilled on the Leased Lands, and (c) any area producing Geothermal Resources explored or produced through areas previously contained in the Area of Mutual Interest as defined in clauses (a) and (b) of this definition.

"Capital Contribution" means the money or property, if any, contributed to the capital of the Partnership by each Partner pursuant to Article VI of this Agreement. The Capital Contribution of each Partner shall be attributed to any subsequent owner of the Partnership Interest of such Partner.

"Capital Expenditures" means expenditures by the Partnership for capital improvements to the Generation Facility in accordance with the Operations Agreement or otherwise in accordance with this Agreement.

"Code" means the Internal Revenue Code of 1986, as amended, or corresponding provisions of subsequent superseding revenue laws.

"Construction Financing" means the nonrecourse indebtedness incurred by the Partnership in connection with the design and construction of the Generation Facility to be secured by all Partnership Properties and to cover all construction costs, fees and expenses incurred in the design and construction of the Generation Facility.

"Distribution" or "Distributions" means any Nonliquidating Distributions or Liquidating Distributions of cash or other property by the Partnership to the Partners arising from their interests in the Partnership, but does not include any payment or reimbursement made to the General Partner pursuant to Article VIII of this Agreement.

"Drilling Partnership" means any of the partnerships, either general or limited, if any, formed by MOL or its Affiliate pursuant to the Development Agreement.

"Effective Date" has the meaning provided in Article V of this Agreement.

"Event of Default" has the meaning provided in Section 13.1 of this Agreement.

"Final Development Plan" means the final plan providing for the planning, design, construction and operation and management of the Generation Facility to be completed by the Operator pursuant to the Operations Agreement.

"Fiscal Year" means a period of twelve (12) consecutive months beginning on January 1st of each year and ending on December 31st of each year, except that the first Fiscal Year commences on the Effective Date and upon the termination of the Partnership the final Fiscal Year shall end on the date of such termination.

"Gain or Loss from a Capital Transaction" means gain or loss recognized by the Partnership, for federal and state income tax purposes, upon the occurrence of a capital transaction which gives rise to Net Extraordinary Cash Flow, including, without limitation, the sale of all or substantially all of the Partnership's assets in connection with a Liquidation.

"General Partner" means MOL.

"Generation Facility" means the electrical power generation facility contemplated by this Agreement and the Development Agreement and to be designed, constructed and operated by the Operator on behalf of the Partnership pursuant to this Agreement and the Operations Agreement.

"Geothermal Resources" has the meaning given it by Section 182-1 of the Hawaii Revised Statutes, and includes, but is not limited to, hot water and steam.

"Gross Revenues" means all revenues of every kind received by the Partnership whether resulting from the operation of the Generation Facility or otherwise.

"Initial Development Plan" means the initial plan providing for the planning, design, construction and operation and management of the Generation Facility prepared by Geothermex, Inc. attached hereto as Exhibit "A" and incorporated herein by reference.

"Lani-Puna VI Assignment" means that certain Assignment in substantially the form attached hereto as Exhibit "B" and incorporated herein by reference, providing for the assignment from BGC to the Partnership of all of BGC's right, title and interest in and to the Lani-Puna VI Well and related fixtures and equipment but not the mineral interests lying beneath said well,

"Lani-Puna VI Well" means the well identified in that certain report prepared by Geothermex, Inc. ("Geothermex") entitled "Drilling History and Geology of the Lani-Puna VI Geothermal Test, Lani-Puna Prospect" and dated December 1984.

"Leased Lands" means the lands under which the mineral interests demised by the State Geothermal Lease are contained.

"Limited Partner" means BGC.

"Liquidating Distribution" means a distribution of Total Distributable Income, Net Extraordinary Cash Flow or other Partnership cash or property to the Partners made by reason of the Liquidation of the Partnership or the Liquidation of a Partner's Partnership Interest under Treasury Regulations Section 1.761-1(d).

"Liquidation" means, with respect to the Partnership, the termination of the Partnership under Section 708(b)(1)(A) of the Code and with respect to a Partner when the Partnership is not in Liquidation, as defined above in this paragraph, the liquidation of a Partner's Interest in the Partnership under Treasury Regulations Section 1.761-1(d).

"Loan to Defaulting Partner" or "Loans to Defaulting Partner" means a loan or loans made by a Partner or its Affiliate to the other Partner who fails to advance funds to the Partnership as required by Section 6.4 of this Agreement.

"Minimum Gain" means an amount determined by (i) computing, with respect to each nonrecourse liability of the Partnership, the amount of gain (of whatever character), if any, that would be realized by the Partnership if it disposed of (in a taxable transaction) the assets of the Partnership subject to such liability in full satisfaction thereof (and for no other consideration), and (ii) then aggregating the amounts so computed. The amount of the Partnership's Minimum Gain shall be determined in accordance with the rules set forth in Section 1.704-1T(b)(4)(iv)(c) of the Treasury Regulations. A Partner's share of the Partnership's Minimum Gain at the end of any Fiscal Year of the Partnership shall equal the excess, if any, of (a) the sum of the aggregate "nonrecourse deductions" (as defined in Section 1.704-1T(b)(4)(iv)(b) of the Treasury Regulations) allocated to such Partner (and such Partner's predecessors in interest, if any) up to that time and the aggregate distributions to such Partner (and such Partner's predecessors in interest, if any) up to that time of proceeds of a nonrecourse liability that are allocable to an increase in the Partnership's Minimum Gain, over (b) the sum of such Partner's (and such predecessors') aggregate share of the net decreases in the Partnership's Minimum Gain up to that time and such Partner's (and such predecessors') aggregate share of the decreases up to that time in the Partnership Minimum Gain resulting from revaluation of Partnership property subject to one or more nonrecourse liabilities of the Partnership property subject to one or more nonrecourse liabilities of the Partnership, all determined in accordance with the rules set forth in Section 1.704-1T(b)(4)(iv)(f) of the Treasury Regulations.

"Net Extraordinary Cash Flow" means, for any period with respect to which a Distribution is to be made, the net proceeds of a significant event of a capital

nature, including sales of all or any substantial part of the Property, sales of any significant Partnership asset other than in the ordinary course of the Partnership's business, any refinancing, casualty or condemnation with respect to the Property, and any similar event determined by the Partners to be significant.

"Net Income" or "Net Loss" means the net income or net loss, respectively, of the Partnership as determined for financial reporting purposes on the accrual method or cash method of accounting, whichever is selected by the Partners.

"Net Taxable Income" or "Net Taxable Loss" means the net income or net loss, respectively, of the Partnership as determined for federal and state income tax purposes.

"Nonliquidating Distributions" means distributions of Total Distributable Income, Net Extraordinary Cash Flow or other Partnership cash or property to the Partners, other than in a Liquidating Distribution.

"Nonrecourse Deductions" means deductions of the amount and type described in Section 1.704-1(b)(4)(iv)(b) of the Treasury Regulations. The amount of Nonrecourse Deductions for a Fiscal Year of the Partnership equals the excess, if any, of the net increase in the amount of the Partnership's Minimum Gain during such Fiscal Year, over the aggregate amount of any distributions during such Fiscal Year of proceeds of a nonrecourse liability that are allocable to an increase in the Partnership's Minimum Gain, determined according to the provisions of Section 1.704-1(b)(4)(iv)(b) of the Treasury Regulations.

"Operating Account" means a separate account or accounts maintained by or on behalf of the Partnership with a financial institution in the State of Hawaii into which are deposited all monies received by or on behalf of the Partnership from its operations, including working capital in sufficient amounts to insure the timely payment of all expenses of operating the Generation Facility, including, without limitation, Total Fixed Charges and Total Operating Expenses.

"Operations Agreement" means that certain Operations Agreement in substantially the form attached hereto as Exhibit "C" and incorporated herein by reference, to be entered into among the Operator and the Partnership providing for the Operators' planning, design,

construction, operation and management of the Generation Facility on behalf of the Partnership.

"Operator" means the Person designated in accordance with Article XII of this Agreement to undertake the planning, design, construction and operations and management of the Generation Facility on behalf of the Partnership pursuant to the Operations Agreement.

"Organizational Expenses" means the costs or expenses charged or billed to the Partnership, any Partner or any Partner's Affiliates in connection with the formation of the Partnership, including, but not limited to, reasonable accounting, legal and other professional fees, appraisal fees, printing costs, registration fees, filing fees and taxes, if any.

"Partner Loan" or "Partner Loans" means a loan or loans, respectively, made by a Partner or an Affiliate of a Partner to the Partnership pursuant to Article VI of this Agreement.

"Partner Nonrecourse Debt" means any nonrecourse debt (within the meaning of Section 1.704-1T(b)(4)(iv)(k)(2) of the Treasury Regulations) for which any Partner bears the economic risk of loss (as determined pursuant to Sections 1.704-1T(b)(4)(iv)(k)(1) and 1.752-1T(d)(3) of the Treasury Regulations).

"Partner" means either of the Partners.

"Partners" means, collectively, the General Partner and the Limited Partner.

"Partnership Business" means the business engaged in by the Partnership, which shall be the design, construction, ownership, management, and operation of the Generation Facility and, in certain instances, the drilling of geothermal wells, in such manner and upon such terms and conditions as set forth in this Agreement or as the Partnership shall otherwise determine to be in its best interests.

"Partnership Expenses" means all expenses of the Partnership of any kind incurred in connection with the management, administration or conduct of the Partnership, Partnership Property or Partnership Business, including, without limitation, Capital Expenditures, Total Fixed Expenses, Total Operating Expenses, Organizational Expenses, any compensation paid to the General Partner,

including, without limitation, the Management Fee pursuant to Section 8.4, and reimbursements to the General Partner pursuant to Article VIII hereof.

"Partnership Interest" means the beneficial ownership interest of a Partner in the Partnership, which interest shall include the right of such Partner to the assets of the Partnership, such Partner's distributive share of income, gains, profits, losses, expenses, credits, obligations, and liabilities of the Partnership, and any and all other benefits to which such Partner may be entitled as provided in this Agreement and the ULPA. The Partnership Interest of each Partner is set forth in Exhibit "D" attached to and made a part of this Agreement, as the same may be amended from time to time to reflect any changes. The initial Partnership Interest of each Partner is as follows:

Name of Partner	Partnership Interest
MOL	50%
BGC	50%
Total	100%

The Partnership Interest of each Partner is subject to adjustment as provided in Section 6.5 of this Agreement.

"Partnership Property" means the Generation Facility and all cash, real property, personal property, tangible property, intangible property, including, without limitation, all contractual rights, and other assets of the Partnership.

"Permanent Financing" means the permanent non-recourse financing to be obtained by the Partnership to be secured by the Generation Facility and all related fixtures and equipment and incurred to take out the Construction Financing.

"Person" means and includes an individual, corporation, firm, partnership, trust or other entity or form of association.

"Regulatory Allocations" means those allocations made pursuant to Section 9.2 of this Agreement.

"Reserve Fund" means the reserves determined and set aside pursuant to Section 9.5 of this Agreement.

"State Geothermal Lease" means that certain State of Hawaii Department of Land and Natural Resources Mining Lease No. R-3, dated August 10, 1981, by and between the State of Hawaii and BGC, which lease conveys to BGC certain mineral rights in the Leased Lands.

"Total Distributable Income" means, with respect to any period, Gross Revenues minus the following:

(a) Organizational Expenses reimbursed pursuant to Section 8.2 of this Agreement.

(b) Additions to the Reserve Fund pursuant to Section 9.5 of this Agreement;

(c) Total Fixed Charges; and

(d) Total Operating Expenses.

"Total Fixed Charges" means the sum of the following:

(a) The actual debt service payments made in connection with indebtedness of the Partnership with respect to the financing of the Generation Facility, including, but not limited to, debt service on the Construction Financing or the Permanent Financing;

(b) Real Property taxes;

(c) Property insurance costs;

(d) Ground rents;

(e) Equipment lease rents;

(f) Expenses for repair and maintenance of the Generation Facility of an extraordinary nature; and

(g) Compensation paid to the General Partner pursuant to Section 8.4 of this Agreement.

"Total Operating Expenses" means all expenses incurred in connection with the operation and management of the Generation Facility, including, but not limited to:

(a) The consideration payable to the Operator under the Operations Agreement;.

(b) The cost of sales; salaries and wages; departmental expenses; administrative and general expenses; fringe benefits, payroll tax and employee-related expenses; and charges for heat, water, light, power and other utilities to the extent not paid by the Operator;

(c) Expenditures for repairs and maintenance of the Generation Facility in the ordinary course;

(d) Expenditures for replacements not charged to the Reserve Fund;

(e) Insurance premiums for operations;

(f) All taxes, assessments and charges relating to the operation of the Generation Facility and related facilities, including, without limitation, general excise and similar taxes, which may be levied or imposed upon the Partnership or the Partners, but not including real property taxes or corporate franchise or income taxes of the Partnership or the Partners;

(g) Legal fees and fees of accountants and other consultants, to the extent not paid for by the Operator, for consulting and advisory services directly relating to the operation of the Generation Facility, its facilities and the Partnership;

(h) Expenditures for marketing, advertising, sales promotion and public relations; and

(i) The cost of inventories and supplies used in the operation of the Generation Facility.

"Treasury Regulations" means final, temporary and proposed U.S. Treasury Department income tax regulations, as amended.

"ULPA" means the Uniform Limited Partnership Act (1985) (Modified), Chapter 425D of the Hawaii Revised Statutes, as amended.

ARTICLE II

FORMATION, NAME AND PRINCIPAL PLACE OF BUSINESS

Section 2.1. Formation. The Partners shall form the Partnership pursuant to, and effective in

accordance with, the provisions of this Agreement and the ULPA.

Section 2.2. Name. The name of the Partnership shall be "_____ Limited Partnership." Subject to obtaining the Limited Partner's prior written consent, the General Partner may change the name of the Partnership from time to time.

Section 2.3. Principal Office. The principal office of the Partnership shall be located at _____, Honolulu, Hawaii. Subject to obtaining the Limited Partner's prior written consent, the General Partner may relocate the principal office of the Partnership from time to time so long as it remains in the State of Hawaii. The Partnership also may have such additional offices as the Partners may agree.

Section 2.4. Title to Assets. Except as the Partners may otherwise agree in writing in their sole discretion, title to all assets and properties of the Partnership, including but not limited to Partnership Property, owned or acquired by the Partnership shall be held in the name of the Partnership.

ARTICLE III

PURPOSE AND SCOPE OF THE PARTNERSHIP

The purpose of the Partnership is to generate and market electricity produced from Geothermal Resources purchased from either independent or related producers of such resources, including but not limited to, the Drilling Partnership(s), or MOL or its Affiliates. In furtherance of such purpose, the Partnership shall appoint an Operator, initially Geothermex, Inc., which, pursuant to the Operations Agreement, shall (1) design the Generation Facility with a capacity consistent with commercially available Geothermal Resources and prudent engineering practices and obtain all necessary governmental approvals and consents (2) be responsible for the construction of and day-to-day operation and management of such facility and (3) market the electricity and by-products produced by the Generation Facility to Hawaii Electric Light Company, Inc. or other utilities or consumers, all on behalf of the Partnership. Financing for such construction and operation, the Construction Financing and ultimately the Permanent Financing, shall be negotiated by the Operator on behalf of the Partnership, provided, however, the terms

thereof shall be reasonably satisfactory to all Partners. Notwithstanding the foregoing, the Partnership also shall engage in any other business necessary to the accomplishment of the above-described purpose, or otherwise related to such purpose, including but not limited to, the drilling of additional geothermal wells for Geothermal Resources for its own account, whether itself or by delegation to the Operator, if nonrecourse financing on terms and conditions reasonably satisfactory to the Partners, in addition to the Permanent Financing, is available.

ARTICLE IV

CERTIFICATE OF LIMITED PARTNERSHIP

Contemporaneously with the execution of this Agreement, the General Partner shall prepare and execute a Certificate of Limited Partnership and file such Certificate with the Department of Commerce and Consumer Affairs of the State of Hawaii. The General Partner shall file and execute such Certificates of Amendment of Limited Partnership as may be required by the ULPA.

ARTICLE V

TERM

The term of the Partnership shall commence as of the date of the filing of the Certificate of Limited Partnership with the Department of Commerce and Consumer Affairs of the State of Hawaii (the "Effective Date") and shall continue until terminated in accordance with the provisions of this Agreement or by operation of law.

ARTICLE VI

CAPITAL CONTRIBUTIONS AND LOANS

Section 6.1. Initial Capital Contribution of the Limited Partner. On or about the Effective Date, the Limited Partner, as its initial Capital Contribution, shall convey to the Partnership the Lani-Puna VI Well and related fixtures and equipment by executing and delivering to the Partnership the Lani-Puna VI Assignment. The Partners agree that as of the Effective Date the Lani-Puna VI Well has a fair market value of Six Hundred Thousand

Dollars ($600,000.00). Notwithstanding the foregoing, however, if a pipeline easement (the "Pipeline Easement") which would allow the Partnership to construct and utilize a pipeline from the Generation Facility to the Lani-Puna VI Well cannot be obtained by the date of this Agreement as first set forth above, in lieu of the foregoing, the Limited Partner shall contribute to the Partnership as its initial Capital Contribution, the sum of Six Hundred Thousand Dollars ($600,000) in cash, by deposit to a Partnership bank account in Honolulu, Hawaii, by wire transfer or in otherwise immediately available funds.

Section 6.2. Initial Capital Contribution of the General Partner. On the Effective Date, the General Partner, as its initial Capital Contribution, shall contribute to the Partnership, (i) by deposit to a Partnership bank account in Honolulu, Hawaii, Six Hundred Thousand Dollars ($600,000.00) in cash, by wire transfer or in otherwise immediately available funds, and (ii) valid and unencumbered title to the Pipeline Easement, if such easement has been obtained pursuant to MOL's obligations under the Development Agreement.

Section 6.3. Additional Capital Contributions. Each Partner shall make additional Capital Contributions ("Agreed Additional Contributions") only in such respective amounts and at such times as may be agreed to in writing by both Partners. Neither Partner shall be obligated to agree to make any such additional capital contributions to the Partnership. Except as provided in this Agreement neither Partner shall be obligated or entitled to make additional capital contributions to the Partnership.

Section 6.4. Failure to Make Agreed Additional Contributions.

(a) Rights of Nondefaulting Partner. If either Partner (a "Defaulting Partner") fails to make its Agreed Additional Contribution as determined pursuant to Section 6.3 of this Agreement, the other Partner not failing to do so (the "Nondefaulting Partner"), in addition to any remedies it may have hereunder or at law, shall have the right to do any of the following, provided it does so not later than thirty (30) days after the date (the "Cash Need Date") established by the Partners pursuant to Section 6.3 of this Agreement as the date by which the Agreed Additional Contributions were to have been made to the Partnership:

(i) To withdraw its respective Agreed Additional Contribution made to the Partnership, together with interest thereon at the rate of 12% per annum from the date such Agreed Additional Contribution was made;

(ii) To advance any portion of the Agreed Additional Contribution due from the Defaulting Partner (the "Deficiency") to the Partnership as an additional Capital Contribution or as a Partner Loan as may be determined by the Nondefaulting Partner, in its sole discretion, on behalf of and for the account of the Nondefaulting Partner; or

(iii) To make (or cause its Affiliate(s) to make) a loan to the Defaulting Partner (a "Loan to Defaulting Partner") by advancing to the Partnership any portion of the Defaulting Partner's Agreed Additional Contribution on behalf of and for the account of the Defaulting Partner. Such advance shall be characterized as either a Capital Contribution or as a Partner Loan, as determined by the Nondefaulting Partner in its sole discretion.

(b) Limits on Advances by Nondefaulting Partner. Notwithstanding anything contained in Subsection 6.4(a), the total additional advances which may be made by the Nondefaulting Partner pursuant to Subsections 6.4(a)(ii) and (iii) of this Agreement shall not exceed the amount of the Deficiency. If, within thirty (30) days after the Cash Need Date, the Nondefaulting Partner has made additional advances in excess of the Deficiency, such excess shall be refunded to the Nondefaulting Partner.

Section 6.5. Adjustment of Partnership Interests. If the Nondefaulting Partner makes an additional Capital Contribution for its own account pursuant to Subsection 6.4(a)(ii) of this Agreement, the respective Partnership Interests of the Nondefaulting Partner and Defaulting Partner shall thereupon be recalculated so that:

(a) The Partnership Interest of the Defaulting Partner immediately prior to the making of such additional Capital Contribution by the Nondefaulting Partner shall be reduced (but not below 1%) by subtracting therefrom the product (rounded to six decimal places) obtained by multiplying such Partnership Interest by a fraction, the numerator of which is three (3) times the aggregate amount of such additional Capital Contributions made by the Nondefaulting Partner pursuant to Subsection 6.4(a)(ii) (said aggregate being hereinafter referred to

as the "Aggregate Additional Capital Contributions") and the denominator of which is the total amount of all Capital Contributions to the Partnership theretofore made by the Partners, including, without limitation, the Aggregate Additional Capital Contributions; and

(b) The Partnership Interest of the Nondefaulting Partner making such additional Capital Contribution pursuant to Subsection 6.4(a)(ii) shall be increased by adding thereto the product determined pursuant to Subsection 6.5(a) of this Agreement.

Section 6.6. Partner Loans. All Partner Loans made pursuant to the provisions of this Article VI shall be made in compliance with the following provisions:

6.6.1 Partner Loans Not Treated as Capital Contributions. Partner Loans shall not be considered or treated as Capital Contributions.

6.6.2 Loan Documentation. Each Partner Loan shall be evidenced by a promissory note made by the Partnership to the lending Partner or Affiliate (a "Partnership Note") and secured by a mortgage made by the Partnership to the lending Partner or Affiliate (a "Partnership Mortgage"), as follows:

(a) Partnership Notes. Each Partnership Note shall be in such form and substance as required to cause such Partnership Note to represent the effective, enforceable and non-recourse (except to the extent of the Partnership's interest in the Partnership Property) obligation of the Partnership to the lending Partner or Affiliate, as the case may be. The principal of each Partnership Note shall be in the amount of the Partner Loan evidenced by such Partnership Note. All other terms and conditions of each Partnership Note, including, without limiting the generality of the foregoing, interest on the principal of such Partnership Note, shall be commercially reasonable in light of conditions existing at the time such Partnership Note is made, with due consideration given to anticipated Partnership Expenses, necessary reserves, and other factors affecting the Partnership's ability to repay the sums represented by the Partnership Note. The rate of interest of the principal of the Partnership Note shall not exceed the maximum permitted by law. The outstanding principal balance and accrued but unpaid interest of Partnership Notes shall be paid to the lending Partner or Affiliate, as the case may be, from time to time from any funds available to the Partnership.

Except as provided in Article IX of this Agreement, all amounts owed with respect to Partner Loans shall be repaid before any Distributions are made to Partners under Sections 9.3 or 9.4 of this Agreement. In any event, all amounts owed with respect to Partner Loans shall be repaid prior to the dissolution of the Partnership pursuant to Article XVI of this Agreement.

(b) Partnership Mortgages. Partnership Mortgages shall be in such form and substance required to cause each to effectively create a valid mortgage lien on and security interest in the Partnership Property in favor of the lending Partner or its Affiliate(s). A single Partnership Mortgage may secure the repayment of all Partner Loans made by each Partner or its Affiliate(s). The lien and security interest created by a Partnership Mortgage shall permit the lending Partner or its Affiliate(s), as the case may be, to foreclose upon and obtain ownership of all right, title and interest of the Partnership in the Partnership Property in the event that any Partnership Note is not paid when due, but shall otherwise be without recourse against the Partnership. The Partnership Mortgages shall provide that the Partnership has the right to redeem such right, title and interest prior to foreclosure thereof by paying to the lending Partner or its Affiliate(s), as the case may be, the outstanding principal balance of the Partnership Notes secured thereby and interest thereon, together with any costs (including attorneys' fees) incurred by the lending Partner or its Affiliate(s) in connection with such foreclosure proceedings. The Partners agree that such foreclosure would be for value received and shall not be, or be construed as, a forfeiture of the right, title and interest of the Partnership in the Partnership Property. The Partners waive and renounce any right to any appraisement, valuation, stay, extension or redemption concerning such right, title or interest so subject to foreclosure, and all rights concerning the marshalling of assets which may otherwise be provided by the Constitution or laws of the United States, the State of Hawaii or any other governmental entity having jurisdiction. Upon the request of any of the Partnership's other mortgage lenders, including but not limited to the lenders of the Construction Financing or the Permanent Financing, the lending Partners and/or their Affiliates shall each cause their respective Partnership Mortgages to be subordinated to the lien of such lender's mortgage.

6.6.3 Execution of Loan Documents. The General Partner shall execute the Partnership Notes and

Partnership Mortgages on behalf of the Partnership with the consent of the Limited Partner; provided, however, that the Limited Partner's consent shall not be required in connection with any Partner Loans made by the General Partner if the Limited Partner is a Defaulting Partner.

Section 6.7. Loans to Defaulting Partner. All Loans to the Defaulting Partner made pursuant to the provisions of this Article VI shall be made in compliance with the following provisions:

6.7.1 Terms and Conditions of Loans to Defaulting Partner. Each Loan to the Defaulting Partner shall bear interest at the rate of twelve percent (12%) per annum and shall be repaid by the Defaulting Partner within ten (10) days after demand of the Nondefaulting Partner or its Affiliate(s) making the same. Whether or not repayment has been demanded, all Distributions to which the Defaulting Partner is entitled shall be paid directly to the Nondefaulting Partner making such Loan to the Defaulting Partner to be applied in repayment thereof. All payments with respect to any Loan to the Defaulting Partner shall be credited first to any interest then due on such Loan to the Defaulting Partner and any interest which is not paid shall, to the extent not prohibited by law, be added to the principal amount of said Loan to the Defaulting Partner at the end of such calendar year. Upon transfer of all or any portion of a Partner's Partnership Interest, all Loans to the Defaulting Partner made to such Partner shall automatically become due and payable.

6.7.2 Prepayment. Notwithstanding anything to the contrary contained in this Section 6.7, the Defaulting Partner shall have the right to repay without penalty, at any time, in full or in part any Loan to the Defaulting Partner made to it. Any such payment shall be applied first to any interest accrued on such Loan to the Defaulting Partner and then to the outstanding principal balance thereof.

6.7.3 Grant of Security Interest. Each of the Partners hereby pledges, transfers, assigns and hypothecates its entire Partnership Interest to the other Partner as security for the repayment of the aggregate amount of any and all Loans to the Defaulting Partner made to it by the other Partner or its Affiliates. Notwithstanding the foregoing, this Subsection 6.7.3 shall not be construed as anything other than an assignment of a security interest in the Partnership Interests, and, until such time as it becomes a Defaulting Partner, each Partner

shall be entitled to exercise all rights of an owner with respect to its Partnership Interest including, without limitation, rights to receive Distributions. To the extent permitted under applicable law, this Agreement is deemed to be a "security agreement", as defined in Chapter 490, Hawaii Revised Statutes, as amended from time to time, and the Nondefaulting Partner shall have all of the rights and remedies of secured parties under said Chapter 490. Concurrently with the execution of this Agreement, each Partner shall execute and deliver to the other Partners UCC-1 Financing Statements and such further assurances for such purposes as may be necessary. Each Partner hereby authorizes the other Partner to file continuation statements with respect to said UCC-1 Financing Statements in form satisfactory to the secured party Partner without the signature of the debtor Partner whenever lawful, and upon request the debtor Partner will execute such continuation statements. Subject to the provisions of Article XII of this Agreement, the Nondefaulting Partner shall have the right to realize upon its security interest by selling, assigning, transferring, endorsing, and delivering all or any part of the Defaulting Partner's Partnership Interest at public or private sale, in accordance with the following provisions, for such price and on such terms as the Nondefaulting Partner in its discretion shall deem appropriate, provided that every aspect of the sale, including the method, manner, time, place and terms, shall be commercially reasonable and shall include, but not be limited to, a provision for the sale, if commercially feasible, of any contractual rights of the Partnership:

(a) Each purchaser at any such sale holds such Partnership Interest, or any part thereof, absolutely free from any claim or right on the part of the Defaulting Partner and the Defaulting Partner waives (to the extent permitted by law) all rights of redemption, stay and/or appraisal which it now has or at any time in the future may have under any rule or law or statute now existing or hereafter enacted.

(b) The Nondefaulting Partner shall give the Defaulting Partner thirty (30) days' written notice by certified mail (which the Partners agree is reasonable notification within the meaning of Section 9-504(3), Hawaii Revised Statutes) of the Nondefaulting Partner's intention to make any such public or private sale, which notice shall state the time and place of any public sale or the time after which any private sale or other intended disposition is to be made and the terms of any private sale or other intended disposition.

(c) Notwithstanding paragraph (b) of this Subsection 6.7.3, the Defaulting Partner shall have fifteen (15) days after it receives such notice (but in no event more than thirty (30) days after such notice is given) in which to pay to the Nondefaulting Partner (or its Affiliate) the Loan to the Defaulting Partner together with interest thereon and all costs and expenses, (including, without limitation, reasonable attorneys' fees) incurred by the Nondefaulting Partner (or its Affiliate) in pursuing its remedies hereunder, in which event the Defaulting Partner is deemed to have cured its default under this Agreement and shall retain its Partnership Interest.

(d) Any such public sale shall be held at such time within ordinary business hours and at such place as the Nondefaulting Partner may fix and state in the notice of publication (if any) of such sale. At any such sale, the Defaulting Partner's Partnership Interest may be sold as an entirety or separately and for such consideration, and upon such other terms and conditions, as the Nondefaulting Partner may (in its sole and absolute discretion) determine which shall include, but not be limited to, a provision for the payment, if commercially feasible, for any contractual rights of the Partnership. The Nondefaulting Partner shall not be obligated to make any sale of the Defaulting Partner's Partnership Interest if it shall determine not to do so, regardless of the fact that notice of sale of such Partnership Interest may have been given. The Nondefaulting Partner may, without notice or publication, adjourn any public or private sale or cause the same to be adjourned from time to time by announcement at the time and place fixed for sale, and such sale may, without further notice, be made at the time and place to which the same was so adjourned.

(e) If a sale of all or any part of the Defaulting Partner's Partnership Interest is made on credit, the Nondefaulting Partner may retain such Partnership Interest, or part thereof, so sold until the purchase price is paid by the purchaser or purchasers thereof, but the Nondefaulting Partner shall not incur any liability in case any such purchaser or purchasers shall fail to pay such purchase price and, in case of any such failure, such Partnership Interest may be sold again upon like notice.

(f) At any sale made in accordance with this Subsection 6.7.3, the Nondefaulting Partner may bid for or purchase all or any part of the Partnership

Interest offered for sale, free from any right of redemption, stay or appraisal on the part of the Defaulting Partner (all such rights being also hereby waived and released to the extent permitted by law), and may make payment on account thereof by using any claim then due and payable to the Nondefaulting Partner from the Defaulting Partner, pursuant to this Agreement, as a credit against the purchase price, and the Nondefaulting Partner may, upon compliance with the terms of sale, hold, retain and dispose of such property without further accountability to the Defaulting Partner therefor.

(g) A written agreement to purchase all or any part of such Partnership Interest shall be treated as a sale thereof and the Nondefaulting Partner may carry out such sale pursuant to such agreement unless the Defaulting Partner is subsequently deemed to have cured its default under a Loan to the Defaulting Partner pursuant to paragraph (c) of this Subsection 6.7.3.

(h) If a sale is made in accordance with this Subsection 6.7.3, the proceeds thereof shall be distributed as follows: (i) first, to the Nondefaulting Partner in an amount equal to the sum of (x) all costs and expenses, (including, without limitation, reasonable attorneys' fees) incurred by the Nondefaulting Partner in connection with such sale and in pursuing any of its remedies pursuant to this Subsection 6.7.3, and (y) the principal balance of the Loan to the Defaulting Partner made to the Defaulting Partner, together with interest thereon from the date of default until the receipt of sale proceeds by the Nondefaulting Partner; and (ii) last, to the Defaulting Partner, the balance of such sale proceeds.

(i) As an alternative to exercising the power of sale herein conferred upon it, the Nondefaulting Partner may proceed by suit or suits at law or in equity to foreclose its security interest, under this Agreement and sell the Defaulting Partner's Partnership Interest or any part thereof pursuant to judgment or decree of a court or courts having competent jurisdiction.

6.7.4 Assignment of Security Interest. If a Partner becomes a Defaulting Partner, the Nondefaulting Partner may assign the security interest granted by the Defaulting Partner pursuant to Subsection 6.7.3 of this Agreement (and all rights thereunder) and, in the event of such an assignment, the assignee(s) shall have all of the rights and remedies of the assigning Nondefaulting Partner.

Section 6.8. No Interest on Capital Contributions. Unless specifically provided for in this Agreement, no Partner shall receive interest on any Capital Contribution.

Section 6.9. No Withdrawal or Additional Capital Contributions. Except as specifically provided in this Agreement or by law, no Partner shall be entitled to withdraw any part of its Capital Contributions except that each Partner shall be entitled to withdraw Six Hundred Thousand Dollars ($600,000) in cash upon the funding of the Permanent Financing and the receipt of such funds by the Partnership. No Partner shall be required or entitled to make any additional Capital Contribution to the Partnership other than as provided in this Agreement.

Section 6.10. Capital Accounts. A capital account shall be determined and maintained for each Partner throughout the full term of the Partnership in accordance with the capital accounting rules set forth in Section 1.704-1(b)(2)(iv) of the Treasury Regulations. The capital account of each Partner shall be increased and decreased in accordance with the rules set forth in said Section 1.704-1(b)(2)(iv).

ARTICLE VII

STATUS OF THE LIMITED PARTNER

Section 7.1. Rights and Powers; Limitations on Authority to Act. The Limited Partner shall not take part in the management or control of the Partnership Business. Notwithstanding the foregoing and without limiting the rights and powers of the Limited Partner set forth elsewhere in this Agreement, the Limited Partner may do one or more of the following and shall not by reason thereof be deemed to have violated the prohibition contained in the preceding sentence:

(a) Being a contractor for or an agent or employee of the Partnership or of the General Partner or being an officer, director, or shareholder of the General Partner;

(b) Consulting with and advising the General Partner with respect to the business of the Partnership;

(c) Acting as surety for the Partnership or guaranteeing or assuming one or more specific obligations of the Partnership;

(d) Taking any action required or permitted by law to bring or pursue a derivative action in the right of the Partnership;

(e) Requesting or attending a meeting of the Partners;

(f) Proposing, or on a reasonable basis, approving, or disapproving by voting or otherwise, one or more of the following matters:

(i) The dissolution and winding up of the Partnership;

(ii) The sale, exchange, lease, mortgage, pledge, or other transfer of all or substantially all of the assets of the Partnership, including, but not limited to, the Generation Facility;

(iii) The incurrence of indebtedness by the Partnership other than in the ordinary course of its business, including, but not limited to, the Construction Financing and the Permanent Financing;

(iv) A change in the nature of the Partnership Business;

(v) The admission or removal of a general partner in the Partnership;

(vi) The admission or removal of a limited partner in the Partnership;

(vii) A transaction involving an actual or potential conflict of interest between the General Partner and the Partnership or between the Partnership and the Limited Partner;

(viii) An amendment to this Partnership Agreement or Certificate of Limited Partnership referred to in Article VI of this Agreement; or

(ix) Matters related to the Partnership Business not otherwise enumerated in this Section 7.1, which this Agreement states in writing may be subject to the approval or disapproval of the Limited Partner;

(g) Winding up the Partnership; or

(h) Exercising any right or power permitted to Limited Partners under the ULPA and not specifically enumerated in this Section 7.1.

Section 7.2. Liability of the Limited Partner. The Limited Partner shall not be bound by, or be personally liable for, the expenses, liabilities or obligations of the Partnership, and shall not be responsible for any of the losses of the General Partner or be required to guarantee any loans made to the Partnership by any Person. The Partnership Interest owned by the Limited Partner shall be fully paid and, except to the extent provided in Section 6.4 of this Agreement, nonassessable.

Section 7.3. Status of Partnership Interests. Partners shall not have the right to demand or receive property other than cash in return for their Capital Contributions or on account of Distributions to them, if any, and neither Partner shall have priority over the other Partner, either as to the return of Capital Contributions, Net Profits, Net Losses or Distributions, except as provided herein.

ARTICLE VIII

GENERAL PARTNER REIMBURSEMENT

Section 8.1. Agreement Controls Compensation of the General Partner. Except as expressly provided in this Agreement in Section 8.4 or otherwise agreed to in writing by the Partners, no payment will be made by the Partnership to the General Partner or its Affiliates for the services of the General Partner or its Affiliates or any member, stockholder, director, partner or employee of the General Partner or its Affiliates.

Section 8.2. Reimbursement of Organizational Expenses, and Other Partner Expenses. The Partnership shall reimburse the Partners and their Affiliates for any Organizational Expenses paid by the Partners or their Affiliates; provided, however, that the Partnership shall not reimburse any Partner for any expenses paid by such Partner in obtaining any federal, state, or local governmental permits and approvals relating to the design, construction and operation of the Generation Facility or the

financing thereof which costs shall be borne solely by the Partnership.

Section 8.3. Operating Account. Except as provided in this Section 8.3, all interest which accrues on the Partnership Operating Account shall accrue to the Partnership. Therefore, the Partners desire that Partnership funds, rather than Partner funds, be used to meet the working capital needs of the Partnership if sufficient funds are available. Notwithstanding the foregoing, the General Partner may make operating advances to the Partnership in such amounts as the General Partner determines is reasonably necessary for the Partnership's immediate operating needs. Interest shall accrue on the outstanding balance of said operating advances at a non-compounded fluctuating rate per annum, adjusted monthly, equal to the long-term prime interest rate offered by major U.S. banks, from time to time, until the operating advances are repaid to the General Partner. The Partnership shall repay the operating advances, and all interest accrued thereon, to the General Partner.

Section 8.4. General Partner's Compensation. The General Partner shall receive a monthly payment (the "Management Fee"), in arrears, from the Partnership of [insert] _____ in consideration of the General Partner's performance of its obligations under this Agreement. The Management Fee shall be subject to a yearly increase of _____ [insert] _____ percent (_____%) commencing on the first anniversary of this Agreement and on a compound basis, after each one (1) year period thereafter. The Management Fee shall not be reduced by reason of any payment made to the General Partner acting as the Operator pursuant to Section 12.4 of this Agreement. Neither this Section 8.4 nor receipt by the General Partner of the Management Fee shall limit the right and authority of the General Partner pursuant to Section 17.2 of this Agreement; provided, however, that the Management Fee may be reduced pursuant to agreement of the Partners as described in Section 17.2 of this Agreement.

ARTICLE IX

ALLOCATION OF INCOME AND LOSS; DISTRIBUTIONS

Section 9.1. Allocation of Income and Loss.

9.1.1 Net Taxable Income or Loss. After giving effect to the provisions of first, Section 9.2 and

next, Section 9.1.3 of this Agreement, the Partnership's Net Taxable Income or Net Taxable Loss, as the case may be, shall be allocated to the Partners in accordance with their respective Partnership Interests.

In the event a Partner's Capital Account is disproportionate to the Partner's Partnership Interest, solely by reason of Section 9.2 of this Agreement, the Net Taxable Income or Net Taxable Loss shall be allocated among the Partners in such a way so as to bring the Partner's Capital Accounts back into parity with the respective Partner's Partnership Interest as quickly as possible.

9.1.2 Gain or Loss from Capital Transactions. After giving effect to the provisions of first, Section 9.2 and next, Section 9.1.3 of this Agreement, Gain or Loss from Capital Transactions shall be allocated to the Partners as follows:

(i) First, all Gain or Loss from Capital Transactions shall be allocated entirely to MOL or BGC, as the case may be, until the ratio that each Partner's capital account balance bears to the total Capital Account balances of the Partners is equal to said Partner's Partnership Interest; and

(ii) All remaining Gain or Loss from Capital Transactions shall be allocated to the Partners in accordance with their respective Partnership Interests.

9.1.3 General Allocation Rules.

(a) After first giving effect to the Regulatory Allocations set forth in Section 9.2 of this Agreement and except as otherwise provided in Section 9.1, each item of Partnership income, gain, deduction, loss and credit for federal income tax purposes shall be allocated to the Partners in accordance with the allocation of the corresponding item of Net Taxable Income and Net Taxable Loss.

(b) If, for federal income tax purposes, the basis to the Partnership of the Lani-Puna VI Well contributed by BGC and/or the Pipeline Easement contributed by MOL differs from fair market as set forth in Section 6.1 of this Agreement, income, gain, loss and deductions with respect to the Lani-Puna VI Well and/or the Pipeline Easement shall be allocated between the Partners so as to take account of, as required or

permitted by Section 704(c) of the Code, the variation between basis of the Lani-Puna VI Well and/or the Pipeline Easement to the Partnership for federal income tax purposes (determined at the time of contribution) and said fair market value. The capital accounts of the Partners shall be adjusted to reflect these allocations in accordance with Section 1.704-1(b)(2)(iv)(g) of the Treasury Regulations.

(c) If the capital accounts of the Partners are increased or decreased to reflect a revaluation of any of the Partnership Property on the Partnership's books, subsequent allocations of income, gain, loss and deduction with respect to such Property shall take account of any variation between the adjusted tax basis and book value of such Property in the same manner as under Section 704(c) of the Code.

(d) Any elections or other decisions relating to allocations made pursuant to this Section 9.1 shall be made by the General Partner in any manner that reasonably reflects the purpose and intention of this Agreement and with the prior written consent of the Limited Partner. Allocations of tax items under Section 9.1 shall not in any way affect or be taken into account in computing any Partner's capital account or right to Distributions under this Agreement.

Section 9.2. Regulatory Allocations. Notwithstanding any other provisions of this Article IX to the contrary, the following allocations (if and to the extent applicable) shall override the allocations made pursuant to Section 9.1 of this Agreement:

(a) If there is a net decrease in the Partnership's Minimum Gain during a Fiscal Year of the Partnership, the Partners shall be allocated, before any other allocation of Partnership items for such Fiscal Year is made under Section 704(b) of the Code, items of income and gain for such Fiscal Year (and, if necessary, subsequent Fiscal Years) in the amounts and proportions set forth in Section 1.704-1T(b)(4)(iv)(e) of the Treasury Regulations.

(b) If there is a net decrease in the Minimum Gain attributable to a Partner Nonrecourse Debt during a Fiscal Year of the Partnership, any Partner with a share of the Minimum Gain attributable to such Partner Nonrecourse Debt shall be allocated items of income and gain for such Fiscal Year (and, if necessary, subsequent

Fiscal Years) in the amounts and proportions set forth in Section 1.704-1T(b)(4)(iv)(h)(4) of the Treasury Regulations.

(c) Except as provided in Subsections 9.2(a) and (b) above, if a Partner unexpectedly receives an adjustment, allocation or distribution described in clause (4), (5) or (6) of Section 1.704-1(b)(2)(ii)(d) of the Treasury Regulations, such Partner shall be allocated items of income and gain (consisting of a pro rata portion of each item of Partnership income, including gross income and gain, for the Fiscal Year of the Partnership in which such adjustment, allocation or distribution occurs) in an amount and manner sufficient to eliminate as quickly as possible, any Adjusted Capital Account Deficit in said Partner's capital account created or increased by such adjustment, allocation, or distribution. This subsection 9.2(c) is intended to constitute a "qualified income offset" within the meaning of Section 1.704-1(b)(2)(ii)(d) of the Treasury Regulations and shall be interpreted consistently therewith.

(d) Any item of Partnership loss, deduction or Code Section 705(a)(2)(B) expenditure that is attributable to a Partner Nonrecourse Debt shall be allocated to the Partner or Partners bearing the economic risk of loss for such debt in the amounts and proportions set forth in Section 1.704-1T(b)(4)(iv)(h)(2) of the Treasury Regulations.

(e) To the extent that an allocation of Net Taxable Loss to a Partner which is otherwise required by Subsection 9.1.1 would create or increase an Adjusted Capital Account Deficit for such Partner, such Net Taxable Losses shall be reallocated to the other Partners in proportion to their respective shares of the Net Taxable Losses for the Fiscal Year (to the extent that such reallocation does not create or increase an Adjusted Capital Account Deficit for any such other Partner).

(f) The Regulatory Allocations set forth in Subsections 9.2(a) through (e) above are designed to comply with certain requirements of the Treasury Regulations promulgated under Section 704(b) of the Code and may not be consistent with the manner in which the Partners intend to make Partnership Distributions. In such an event, and notwithstanding the provisions of Section 9.1 of this Agreement, other amounts of income, gain, loss and deduction of the Partnership shall be allocated in such a

manner as to prevent the Regulatory Allocations from distorting the manner in which the Partnership Distributions will be made to the Partners pursuant to Section 9.3 of this Agreement. In general, the Partners anticipate that this will be accomplished by specially allocating other Net Taxable Income, Net Taxable Loss and items of income, gain, loss and deduction among the Partners, so that the net amount of the Regulatory Allocations and special allocations to each Partner is zero.

Section 9.3. Nonliquidating Distributions.

(a) Subject to the provisions of Section 9.5 of this Agreement, the Total Distributable Income for each calendar month shall be distributed to the Partners in accordance with their respective Partnership Interests.

(b) All Net Extraordinary Cash Flow received prior to Liquidation of the Partnership shall be applied to the Partnership's Reserve Fund, unless the Partners mutually agree in writing to make Nonliquidating Distributions of Net Extraordinary Cash Flow. Nonliquidating Distributions of Net Extraordinary Cash Flow, if any, shall be distributed to the Trustees in accordance with their respective Partnership Interests.

Section 9.4. Liquidating Distributions.

(a) Upon Liquidation of the Partnership (or any Partner's interest in the Partnership), Liquidating Distributions to the Partners shall be made in accordance with the respective positive capital account balances of the Partners as determined after taking into account all capital account adjustments for the Partnership's Fiscal Year during which such Liquidation occurs (other than those made pursuant to this Section 9.4 or pursuant to any obligation of a Partner to restore a deficit balance in its capital account) by the end of such Fiscal Year or, if later, within ninety (90) days after the date of such Liquidation. Such Liquidating Distributions shall be made in the order of priority set forth in Section 15.3 of this Agreement.

(b) If any Partnership assets are to be distributed in kind under this Section 9.4, such assets shall be distributed on the basis of the fair market value thereof, as agreed to by the Partners in accordance with Section 18.2 of this Agreement. The difference, if any, between the book value of any such asset on the books of

the Partnership and its fair market value shall, for purposes of this Agreement, be treated as gain or loss realized by the Partnership in Liquidation and shall be allocated among the Partners in accordance with this Article IX.

Section 9.5. Reserves Prior to Distributions. Prior to the making of any Nonliquidating Distributions, the Partnership's Gross Revenues in each calendar month shall be applied to establish and maintain reasonable reserves for Capital Expenditures and for working capital (the "Reserve Fund") necessary or desirable, in the reasonable judgment of the General Partner, after consultation with the Limited Partner, for the operation of the Partnership Business, as determined by the General Partner, subject to consultation with the Limited Partner. Notwithstanding the foregoing, all Net Extraordinary Cash Flow shall be applied to the Reserve Fund unless otherwise agreed by the Partners.

Section 9.6. No Priority. Except as otherwise agreed to by the Partners, in connection with any Distribution, whether upon winding up of the Partnership or otherwise and whether or not it shall constitute a return of capital, no Partner shall have the right to demand or receive property other than cash.

ARTICLE X

FISCAL AFFAIRS

Section 10.1. Books and Records.

(a) The General Partner shall maintain, or cause to be maintained, true and accurate books and records of account of the transactions of the Partnership, including a capital account for each Partner, in accordance with generally accepted accounting principles consistently applied.

(b) The General Partner shall at all times keep the following records at the principal office of the Partnership;

(i) A current list of the full name and last known address of each Partner separately identifying the General Partners in alphabetical order and the Limited Partners in alphabetical order;

(ii) A copy of the Certificate of Limited Partnership and all Certificates of Amendment thereto, together with copies of any power of attorney pursuant to which any Certificate has been executed;

(iii) Copies of the Partnership's federal, state and local income tax returns and reports, if any, for the three (3) most recent years;

(iv) A copy of this Agreement, including any amendments hereto;

(v) Copies of the Partnership's financial statements for the three (3) most recent years; and

(vi) Copies of the Partnership's books and records for the three (3) most recent years.

(c) All of the records referred to in Subsection 10.1(b) above shall be open to inspection and examination by the Partners or their duly authorized representatives at all reasonable times during normal business hours. Each Partner shall be provided with a copy of any such record upon request, but at the expense of the requesting Partner.

Section 10.2. Bank Accounts. All funds of the Partnership shall be deposited in its name in such checking and savings accounts, certificates of deposit, United States government obligations or other short-term interest bearing accounts as shall be selected by the General Partner in its discretion. Withdrawals therefrom shall be made upon such signature or signatures as the General Partner may select in its discretion, or delegate to the Operator pursuant to the Operating Agreement.

Section 10.3. Financial and Other Reports. The General Partner shall cause an independent certified public accountant selected by the General Partner and approved by the Limited Partner to prepare audited financial statements (i.e., statements of assets and liabilities and a statement of revenues and expenses) and Partnership information necessary for the preparation of the Partners' federal and State of Hawaii income tax returns. Copies of such statements and information shall be distributed to each Partner prior to March 1st following the close of each Fiscal Year. Either Partner may request that such

audited financial statements be further audited an independent certified public accountant selected by such Partner. The Partner requesting the additional audit shall be bear the expense thereof; provided, however, that notwithstanding the foregoing, the Partnership shall bear the expense of any additional audit requested by the Limited Partner if such audit results in an adjustment of ten percent (10%) or greater of any material item set forth in the financial statements. Notwithstanding anything contained in Section 10.1 of this Agreement, all such financial statements shall be kept for a period of not less than six (6) years in the principal office of the Partnership, and shall be open to inspection and examination by the Limited Partner or its duly authorized representatives at all reasonable times during normal business hours.

Section 10.4. Tax Returns and Other Governmental Reports. The General Partner shall cause income tax returns for the Partnership to be prepared by an independent certified public accountant selected by the General Partner and approved by the Limited Partner. Copies of such returns shall be submitted to each Partner for approval no later than thirty (30) days prior to the required filing date for such return. Each Partner shall review and approve or disapprove, in writing, such returns within twenty-one (21) days after receiving the same, provided, however, if the General Partner shall not receive notice of the Limited Partner's approval or disapproval of the return within the applicable time period, then for purposes of this Agreement and the General Partner's obligations hereunder, the Limited Partner shall be deemed to have approved said return(s). Following approval by the Partners, the General Partner shall file such returns with the appropriate government authorities within five (5) business days, but in any event in such a manner so as to not cause any applicable filing deadline to be missed. The General Partner shall prepare or cause to be prepared and timely filed with appropriate federal, state and local regulatory and administrative bodies, all reports required by such bodies under then current applicable laws, rules and regulations. Such reports shall be prepared on the accounting or reporting basis required by such regulatory and administrative bodies. Each Partner shall be provided with a copy of all such reports. Notwithstanding anything to the contrary contained in Section 10.1 above, all such returns and reports shall be kept in the principal office of the Partnership for a period of six (6) years, and shall be open to inspection and examination by the Partners or their duly authorized representatives at all reasonable times during normal business hours.

Section 10.5. Federal Tax Matters; Method of Accounting. The Partnership shall keep its books for federal income tax purposes in accordance with the following provisions:

(a) The classification, realization and recognition of income, gain, loss, deduction and other items shall be done in accordance with the method of accounting chosen by the Partners; and

(b) The General Partner may cause the Partnership to make all elections required or permitted to be made for federal income tax purposes, only upon the prior written approval of the Limited Partner.

ARTICLE XI

RIGHTS AND OBLIGATIONS OF THE GENERAL PARTNER

Section 11.1. Rights and Duties Generally. The right to manage and conduct the Partnership Business, subject to the provisions of Article VII of this Agreement, shall be vested in the General Partner. The General Partner shall be primarily responsible to guide and direct the Partnership to achieve its purposes and shall devote such time, skill and attention to the business and affairs of the Partnership as may be reasonably required or calculated to best achieve its goals. The General Partner shall not be liable to the other Partners for any errors in business judgment except for gross negligence or willful dereliction of its duties or for fraud. Notwithstanding the above, the Partners shall appoint an Operator pursuant to the Operations Agreement and in connection therewith, and subject to the provisions of Section 11.2, Section 12.1 and Article X of this Agreement, the General Partner shall be relieved of any duty, obligation or responsibility, nor have any authority to, act on behalf of the Partnership with respect to the matters included in such Operations Agreement.

Section 11.2 Rights and Powers of the General Partner in the Event There Is No Operator.

11.2.1 General Authority. In the event there is no Operator acting on behalf of the Partnership, or if the Operator is in breach of or is unable to perform its duties under the Operations Agreement, the General

Partner shall have all authority, rights and powers necessary and desirable to perform the Operator's duties under the Operations Agreement on behalf of the Partnership as if the General Partner were the Operator thereunder and those necessary to the operation and management of the Partnership Business which, by way of illustration and not by way of limitation shall include the authority, right and power, in the General Partner's discretion:

(a) To acquire and hold the Partnership Property upon such terms as the General Partner deems to be in the best interests of the Partnership;

(b) To cause the Partnership to comply with all applicable laws in connection with the ownership, management and operation of the Partnership Property;

(c) To apply the proceeds from any loans or refinancing of loans, including, but not limited to, the Construction Financing and the Permanent Financing, to the repayment of existing loans, to the funding of the Reserve Fund, to Distributions, or for any other Partnership purposes;

(d) To acquire and enter into any contract of insurance or bonding agreement which the General Partner deems to be necessary or desirable for the protection of the Partnership and the Partners, for the conservation of any of the Partnership Property, or for any purpose convenient or beneficial to the Partnership;

(e) To employ or retain Persons in the operation and management of the Partnership Business;

(f) In addition to the contracts and agreements described above, to enter into any and all other contracts and agreements, containing such terms as the General Partner may determine to be desirable, in its discretion, pertaining to the acquisition, operation and management of the Partnership Property, or any portion thereof, or the Partnership Business; and

(g) To execute, acknowledge and deliver any and all instruments to effectuate the foregoing, and to take all such action in connection therewith as the General Partner shall deem necessary or appropriate, in its discretion.

11.2.2 Matters Requiring Consent of the Limited Partner. Notwithstanding anything to the contrary contained in Section 7.1 or Subsection 11.2.1 of this Agreement, the General Partner shall have no authority without the prior written consent of the Limited Partner to:

(a) Do any act in contravention of this Agreement including terminating or otherwise acting so as to breach, cause a default under the Operating Agreement with the Operator;

(b) Appoint an Operator other than Geothermex, Inc. or otherwise amend the Operations Agreement;

(c) Do any act which would make it impossible to carry on the Partnership Business;

(d) Confess a judgment against the Partnership in excess of $10,000;

(e) Possess Partnership Property or assign the rights of the Partnership in specific Partnership Property for other than a Partnership purpose;

(f) Amend this Agreement, or the Operations Agreement;

(g) Borrow money and refinance loans, including, but not limited to, the Construction Financing and the Permanent Financing, and, if security is required therefor, to mortgage, pledge, grant security interests in, or otherwise subject to any other security device, any of the Partnership Property or interest of the Partnership in the Partnership Business; or

(h) Except in the ordinary course of business, incur indebtedness upon, sell, exchange, lease, pledge or transfer any significant asset of the Partnership or Partnership Property; or

Section 11.3. Specific Duties of the General Partner. Without limiting the generality of the foregoing, the General Partner shall (a) prepare and submit to the Limited Partner for review and approval a profit and loss statement for each calendar month within thirty (30) days after the end of each calendar month, and (b) supervise the Operator's performance under the Operations Agreement and consult on a regular basis with the Limited

Partner as to the Operator's performance under such Operations Agreement.

Section 11.4. Determination of the General Partner's Authority. No Person dealing with the General Partner shall be required to determine its authority to make any commitment or undertaking on behalf of the Partnership, nor to determine any fact or circumstance bearing upon the existence of such authority. In addition, no Person dealing with the General Partner shall be required to determine the sole and exclusive authority of the General Partner to sign and deliver any contract, agreement or other instrument on behalf of the Partnership or to see to the application or distribution of revenues or proceeds paid or credited in connection therewith, unless such Person shall have received written notice affecting the same.

Section 11.5. No Voluntary Dissolution of the General Partner. The General Partner shall not voluntarily dissolve without the prior written consent of the Limited Partner.

ARTICLE XII

OPERATOR

Section 12.1. Appointment of Operator. The Partnership shall enter into the Operations Agreement with the Operator and delegate to the Operator the planning, permitting, design, negotiation of financing, supervision of construction, operations and day-to-day management of and marketing of electrical power and by-products produced by the Generation Facility. The Partners agree that the initial Operator shall be Geothermex, Inc. The General Partner shall oversee the Operator in the performance of its duties and shall act as a liaison between the Operator, the Partnership and the Limited Partner. The Operator shall act only in accordance with the Operations Agreement, the Initial Development Plan.

Section 12.2. Operator's Duties. The duties of the Operator, which shall be set forth more specifically in the Operations Agreement shall include the following:

(a) Strategic Planning of the Partnership Business including but not limited to:

(i) the obtaining of all permits, consents, licenses and approvals for the design, construction and operation of the Generation Facility from any and all governmental agencies or authorities;

(ii) all work necessary for the final planning and design of the Generation Facility;

(iii) all work necessary for locating the Generation Facility;

(iv) the negotiation of, subject to the approval of the Partners, the terms of the Construction Financing and the Permanent Financing, and the obtaining of the same or other financing necessary for the conduct of the Partnership Business;

(v) supervising the construction of the Generation Facility, including the hiring and supervision of all necessary construction contractors and crews and all materials;

(vi) negotiating the sale of all electricity and other products produced by the Generation Facility to utilities and consumers (i.e., the Power Supply Contracts);

(vii) planning, obtaining all necessary permits, approvals, consents and licenses for and supervising any and all additional geothermal drilling undertaken by the Partnership for its own account;

(b) the management of the day-to-day operation of the Generation Facility.

The Operator shall act only in accordance with the Operations Agreement and the Operating Plan attached thereto, subject to permitted variations in performance which are either (a) within the range of permitted variance under the Operations Agreement or (b) as are reasonably agreed to by the General Partner after consultation with the Limited Partner.

Section 12.3. Termination of Operator. If the Operator is terminated pursuant to a breach of the Operations Agreement or by mutual agreement of the Partners, the General Partner shall use all reasonable efforts to locate a new Operator, to perform the duties of the Operator set forth herein and in the Operations Agreement. If such Operator cannot be located within six (6) months of

the termination of the Operator, then the Partners shall have the right to delegate the duties of the Operator to the General Partner or terminate this Agreement by written consent of all Partners.

Section 12.4. Operations Without Operator. In the event the Partnership shall not have an Operator, including any periods during which the Partnership shall be seeking to employ an Operator, the General Partner shall assume the duties of the Operator and shall perform all such duties in accordance with the previous Operations Agreement as if the General Partner were the Operator thereunder and in that regard, the General Partner will receive the consideration to be paid the Operator under such agreement for such period.

ARTICLE XIII

DEFAULTS; REMEDIES

Section 13.1. Event of Default. Each of the following circumstances shall constitute an "Event of Default" for purposes of this Agreement:

(a) If either Partner shall fail or refuse to make any Capital Contributions to the Partnership other than an Agreed Additional Contribution pursuant to Article VI of this Agreement which it is required to make pursuant to this Agreement, or to make other payments as required by the Agreement within thirty (30) days after written demand by the other Partner for such payment; or

(b) If either Partner shall fail to perform or observe any covenant or condition reasonably capable of observance or performance as required under this Agreement within thirty (30) days after written demand by the other Partner for such performance or observance provided, however there shall exist no Event of Default, if such default cannot be practicably cured within said thirty (30) day period, and the defaulting Partner shall have agreed in writing to proceed diligently to cure such default and such undertaking shall be reasonably acceptable to the nondefaulting Partner, provided, further that said default shall, in any event, be cured within three hundred sixty-five (365) days of the defaulting Partner's receipt of the original written demand; or

(c) If a decree or order is rendered by a court having jurisdiction (i) adjudging a Partner a bankrupt or insolvent, or (ii) approving as properly filed a petition seeking reorganization, readjustment, arrangement, composition or similar relief for a Partner under the federal bankruptcy laws or any other similar applicable law or practice, and if such decree or order referred to in this clause (ii) shall have continued undischarged and unstayed for a period of thirty (30) days; or

(d) If a decree or order is rendered by a court having jurisdiction (i) for the appointment of a receiver or liquidator or trustee or assignee in bankruptcy or insolvency of either Partner or a substantial part of the property of either Partner, or for the winding up or liquidation of its affairs, and such decree or order shall have remained in force undischarged and unstayed for a period of thirty (30) days, or (ii) for the sequestration or attachment of any property of either Partner without its return to the possession of said Partner or its release from such sequestration or attachment within thirty (30) days thereafter; or

(e) If any Partner (i) institutes proceedings to be adjudicated a voluntary bankrupt or an insolvent, or (ii) consents to the filing of a bankruptcy proceeding against it, or (iii) files a petition or answer or consent seeking reorganization, readjustment, arrangement, composition or similar relief under federal bankruptcy laws or any other similar applicable law or practice, or (iv) consents to the filing of any such petition, or to the appointment of a receiver or liquidator or trustee or assignee in bankruptcy or insolvency of it or of a substantial part of its or his property, or (v) makes an assignment for the benefit of creditors, or (vi) is unable to or admits in writing its inability to pay its debts generally as they become due, or (vii) takes corporate action in furtherance of any of the aforesaid purposes.

Section 13.2. Remedies. Subject to the limitations set forth in this sub-section, if an Event of Default shall have occurred, the nondefaulting Partner may, at its option, elect to:

(a) Advance funds sufficient to pay the obligations of the defaulting Partner or to procure the performance by third parties of services which are required to be rendered by the defaulting Partner hereunder, in either of which cases the Partner advancing the same shall be reimbursed by the defaulting Partner for sums

advanced, together with interest at the rate of one per cent (1%) per month thereon commencing on the date of such advancement, prior to the distribution of any funds to the defaulting Partner; and the defaulting Partner shall not be relieved of its obligation to bear its proportionate share of the Net Taxable Losses, if any, of the Partnership.

(b) Purchase the defaulting Partner's Partnership Interest. Such right to purchase shall be exercised by giving not less than thirty (30) days' written notice of such election to the defaulting Partner at any time after such default and before the defaulting Partner shall have cured such default. The purchase price upon such exercise shall be equal to ninety percent (90%) of the fair market value of the defaulting Partner's Partnership Interest as determined in accordance with Section 18.1 of this Agreement as of the last day of the month in which such notice of exercise shall be given (the "Valuation Date" for purposes of this Section 13.2 plus the balance (if any) of any loan (together with accrued and unpaid interest thereon) owed on the Valuation Date by the Partnership to the defaulting Partner. The closing terms shall be as set forth in Article XVII of this Agreement.

(c) Bring an action against the defaulting Partner for payment of the capital required to be contributed by such Partner, in which event the defaulting Partner shall be required to pay reasonable attorney's fees and court costs incurred by the other Partners in bringing such action and interest to the Partnership at the rate of one percent (1%) per month on the unpaid Capital Contribution from the date of the Event of Default.

(d) The nondefaulting Partner may terminate the Partnership by giving at least thirty (30) days' written notice to the defaulting Partner that it intends to dissolve the Partnership. Such dissolution and liquidation shall be carried out in the manner prescribed in Article XVI of this Agreement, it being understood that upon such termination the Partner effecting such termination (the "Liquidating Partner") shall have the right to encumber, sell and convey the Property in the name of the Partnership, or otherwise, at such reasonable prices and upon such terms as may be justified by the existing market conditions which the Liquidating Partner may determine from time to time to be in the best interests of the Partnership.

(e) Bring a proceeding in equity against the defaulting Partner in order to obtain an injunction or other equitable relief, it being acknowledged by each of the Partners that monetary damages may be an inadequate remedy for a default or breach of this Agreement.

(f) Bring an action at law against the defaulting Partner in order to receive damages on behalf of the Partnership or the defaulting Partner, as may be permitted.

Section 13.3. Cumulative Remedies. The remedies provided in this Article XIII upon an Event of Default are not intended to be exclusive but are cumulative and in addition to any other remedies which may at any time be available. Without limiting the generality of the foregoing, if a Partner shall at any time violate or attempt to violate, by failing to make (or making) the transfer of its Partnership Interest required (or prohibited) by the provisions of this Agreement, then the other Partners shall be entitled to a decree of specific performance or an order restraining and enjoining such breach, and the defaulting Partner may not plead as a defense thereto that there would be an adequate remedy at law, it being recognized and agreed that the injury and damage resulting from such a violation would be impossible to measure monetarily.

ARTICLE XIV

TRANSFER OF PARTNERSHIP INTERESTS AND ADDITIONAL PARTNERS

No Partner shall, sell, assign, encumber, pledge, hypothecate or transfer ("Transfer") all or any part of its Partnership Interest, or withdraw or retire from the Partnership, and no person or entity may be admitted to the Partnership as a general or limited partner, except as may be agreed by the Partners in writing.

ARTICLE XV

BANKRUPTCY OR DISSOLUTION OF THE LIMITED PARTNER

Subject to the provisions of Article XIII, upon the adjudication of bankruptcy or insolvency or the dissolution or other cessation to exist as a legal entity of

the Limited Partner, the Partnership shall not be dissolved and the legally authorized representative of the Limited Partner shall have all of the rights of a Limited Partner of the purpose of effecting the orderly winding up and disposition of the business of the Limited Partner.

ARTICLE XVI

DISSOLUTION AND TERMINATION OF THE PARTNERSHIP

Section 16.1. Events of Dissolution. The Partnership shall be dissolved upon the first to occur of any of the following:

16.1.1 Bankruptcy, Insolvency or Dissolution of the General Partner. The bankruptcy, insolvency or dissolution of the General Partner. For purposes of this Subsection 16.1.1, the terms "bankruptcy or insolvency" and "dissolution" shall have the meanings set forth below. Notwithstanding the above, the bankruptcy, insolvency or dissolution of the General Partner shall not constitute an event of dissolution if, within ninety (90) days after such bankruptcy, insolvency or dissolution of the General Partner, all the Partners, including the representative of the General Partner, unanimously agree in writing to continue the business of the Partnership and to the appointment one or more new general partners, to serve as the General Partner(s) of the Partnership.

(a) "Bankruptcy or Insolvency" shall be deemed to have occurred if the General Partner files in any court pursuant to any statute of the United States or any state, a petition in bankruptcy or insolvency, or files for reorganization or for the appointment of a receiver or trustee, of all or a material portion of the General Partner's property, or if the General Partner makes an assignment for the benefit of creditors, admits in writing its inability to pay its debts as they fall due or seeks consents to or acquiesces in the appointment of a trustee, receiver or liquidator of any material portion of its property. If there shall be filed against the General Partner in any court pursuant to any statute of the United States or any state, a petition in bankruptcy or insolvency, or for reorganization, or for appointment of a receiver or a trustee, of all or a substantial portion of the General Partner's property, and within ninety (90) days after the commencement of any such proceeding against the General Partner, such petition shall not have been

dismissed (or satisfactory evidence that the General Partner is diligently contesting such petition shall not have been received by the Limited Partner, provided the General Partner is not otherwise in default hereunder), then the General Partner shall be bankrupt or insolvent for purposes of this Agreement. In addition, if the whole or any portion of the Partnership Interest of the General Partner is subject to levy or attachment is not released or discharged within sixty (60) days , the General Partner shall be deemed "bankrupt or insolvent" for purposes of this Agreement.

(b) "Dissolution" shall be deemed to have occurred upon the earlier of the date of adoption of a plan of liquidation by the General Partner of the effective date of dissolution, in accordance with applicable statutory law.

16.1.2. Sale of Partnership Property. The sale of all or substantially all of the Partnership Property and the disposition of the proceeds therefrom.

16.1.3 By Agreement. The Partners agree in writing to dissolve the Partnership.

Section 16.2. Effective Date of Dissolution. The dissolution of the Partnership shall be effective on the day the event giving rise to the dissolution occurs, but the Partnership shall not terminate until all of its affairs have been wound up and its assets distributed as provided in this Article XVI.

Section 16.3. Procedures Upon Dissolution. Upon a dissolution of the Partnership for any reason, the General Partner shall proceed to liquidate the assets of the Partnership as promptly as is consistent with obtaining the fair value thereof, and, after payment of all expenses related to the Liquidation and, except as otherwise provided by law, shall apply and distribute the proceeds therefrom in the following order:

(a) First, to the payment of creditors of the Partnership in the order of priority provided by law, but excluding (i) Partners and (ii) secured creditors whose obligations are to be assumed or otherwise transferred on the Liquidation of Partnership assets.

(b) Second, to the creation of any reserves which the General Partner may reasonably determine to be necessary to complete such dissolution and Liquidation and which are approved by the Limited Partner.

(c) Third, to the Partners, pro rata, in an amount equal to the unpaid remainder, if any, of their respective reimbursements described in Section 8.2 of this Agreement.

(d) Fourth, to the Partners, pro rata, in accordance with (and to the extent of) their respective positive capital account balance pursuant to Subsection 9.4 of this Agreement.

(e) Fifth, to the Partners, pro rata, and in accordance with their respective Partnership Interests.

Section 16.4. Filing of Certificate. Upon the General Partner's compliance with the foregoing distribution plan, the Partnership shall terminate and the Partners shall cease to be such, and the General Partner shall execute, acknowledge and cause to be filed with the Department of Commerce and Consumer Affairs a Certificate of Cancellation on behalf of the Partnership.

ARTICLE XVII

COMPETITIVE TRANSACTIONS

Section 17.1. Limitation on Other Business. The General Partner, the Limited Partner and the Affiliates of either shall have the absolute right to engage in or possess, independently of the Partnership and the other Partners, any interest in any business, venture or other activity of every nature and description whatsoever, provided, however neither Partner shall engage in, invest in or otherwise be associated or affiliated with any business, venture or enterprise operated on the County of Hawaii, State of Hawaii similar to or competitive with the Partnership Business (other than the drilling for Geothermal Resources for its own account) or any part thereof.

Section 17.2. Contracts with General Partner or Its Affiliates. The General Partner shall have the right, on behalf of the Partnership, to engage the services of (a) the General Partner or any Affiliate of a General Partner in separate capacities for such fees and upon such other terms as the General Partner may determine, subject

to the prior written consent of the Limited Partner or (b) the Limited Partner or any Affiliate of a Limited Partner in separate capacities for such fees and upon such other terms as the General Partner may determine; provided, however, that the fees payable for such services shall be competitive with fees charged by independent third parties rendering commensurate services in the State of Hawaii and shall otherwise be on competitive terms; and, provided further that to the extent the General Partner, on behalf of the Partnership, contracts for the performance of services pursuant to this Section 17.2 for which it is then receiving the Management Fee under Section 8.4 of this Agreement, the Management Fee shall be reduced in an amount agreed to in good faith by the Partners. If any such Person performs any such services for the Partnership, neither the Partnership nor either Partner shall have any right in or to any income or profits derived by such Person from the employment.

ARTICLE XVIII

PURCHASE PRICE OF PARTNERSHIP INTEREST

Section 18.1. Purchase Price. (a) The price to be paid for the purchase of a Partnership Interest pursuant to Section 13.2 of this Agreement shall be the fair market value of such Partnership interest determined as follows:

(i) the fair market value of all of the Partnership Property shall be determined as provided in Section 18.2 of this Agreement;

(ii) Each item of Partnership Property shall be deemed to have been sold on the Valuation Date (as defined in Section 13.2 of this Agreement) for its respective fair market value so determined and, within ten (10) days after such determination, the accountants of the Partnership shall determine the gains or losses of the Partnership which would have resulted from such deemed sales;

(iii) Upon determination of such deemed gains or losses, and solely for purposes of this Section 18.1 the capital accounts of the Partners shall be adjusted as of the Valuation Date in accordance with their respective interests to reflect the allocable deemed gains or losses; and

(iv) The balance in each Partner's capital account after such adjustment shall be deemed to be the fair market value of such Partner's Partnership Interest.

(b) Immediately upon the determination of the fair market value of the Partner's Partnership Interest by the accountants of the Partnership in accordance with the foregoing, said accountants shall notify each of the Partners thereof, which notice shall state in such accountant's opinion the Partnership's maximum exposure on contingent liabilities not adequately covered by insurance and set forth such Partner's maximum share of such exposure.

Section 18.2. Valuation of Partnership Assets. Whenever required by this Agreement, the determination of fair market values of items of Partnership Property shall be made as follows:

(a) Within ten (10) business days after the date on which a Partner gives notice of exercise of right to purchase pursuant to Section 13.2(b) of this Agreement (the "Notice Date"), the Partner giving such notice ("Initiating Partner") shall submit to the defaulting Partner a fair market value balance sheet setting forth its good faith estimate of the fair market value of each item of the Partnership Property. Within twenty (20) business days after receipt of said balance sheet, the defaulting Partner receiving such balance sheet shall submit to the Initiating Partner a similar balance sheet setting forth its good faith estimate of the fair market value of each item of Partnership Property. As to each such item for which the submitted fair market values vary by five percent (5%) or less, the average of the two shall be controlling. As to each such item for which submitted values vary by more than five percent (5%), such value shall be determined by appraisal pursuant to clause (b) of this Section 18.2. If a Partner fails to submit a fair market value balance sheet pursuant to this clause (a) within the applicable time period, the procedure set forth in clause (b) of this Section 18.2 shall be applied as to all items of the Partnership Property.

(b) (i) Except as otherwise agreed by the Partners, if appraisal of any item of Partnership Property is required pursuant to clause (a) of this Section 18.2, then within thirty (30) days after the notice date, each Partner shall appoint an appraiser who shall be an engineer or geologist or other professional experienced in

geothermal exploration and development, and who has experience valuing geothermal properties and equipment such as the Generation Facility.

(ii) If the fair market values of any such item appraised by said appraisers vary by five percent (5%) or less, the average of the two shall be controlling. If the fair market values of any such item appraised by said appraisers vary by more than five percent (5%), said appraisers, within ten (10) days of the submission of the last appraisal, shall appoint a third appraiser meeting the same requirements set forth in clause (b)(i) of this Section 18.2. Said third appraiser shall, within thirty (30) days of his appointment, appraise each such item for which a value has not been established as provided above and submit his appraisal report to each of the Partners. The value determined by the third appraiser for each such asset shall be controlling unless it is less than that set forth in the lower appraisal previously obtained, in which case the value set forth in said lower appraisal shall be controlling, or unless it is greater than that set forth in the higher appraisal previously obtained, in which case the value set forth in said higher appraisal shall be controlling.

(iii) If the Partners fail to appoint an appraiser or if an appraiser or appraisers appointed by the Partners fails to submit any one or more of his appraisals within the required period in accordance with the foregoing, the appraisal submitted by one appraiser shall be controlling, but only as to those items of Partnership Property for which the other appraiser, if any, failed to submit an appraisal.

(iv) The costs of each appraiser appointed by a Partner under this clause (b) of this Section 18.2 shall be borne by the appointing Partner. The cost of the third appraiser as well as all other costs of the appraisal shall be borne by the Partnership. Each Partner shall bear its own attorneys' fees.

(v) All valuations by the Partners or by an appraiser under this Section 18.2 shall be made as of the Valuation Date.

Section 18.3. Restriction on Distributions. If, pursuant to Section 13.2 of this Agreement, a defaulting Partner shall become obligated to sell his Partnership Interest and the initiating Partner shall become obligated

to purchase such interest, then from and after the Valuation Date, no further Distributions shall be made to the defaulting Partner, and from and after such Valuation Date, the Partnership Interest of the defaulting Partner shall be maintained for the account of whichever Partner becomes the purchasing Partner.

Section 18.4. Closing Date. The closing of any purchase of a Partner's Partnership Interest by the other Partners pursuant to Section 13.2 of this Agreement above shall be held at the principal office of the Partnership on such date as the Partners may agree, but not later than the 30th day after the date on which the accountants of the Partnership shall give the Partners notice of their determination of the fair market value of the Partnership Interest of the defaulting Partner in the Partnership pursuant to Section 18.1 of this Agreement.

Section 18.5. Property To Be Conveyed. The defaulting Partner shall transfer to the purchasing Partner the entire Partnership Interest of the defaulting Partner (including, without limitation, any rights of the defaulting Partner to receive (a) repayment of any loans made by it to the Partnership, with accrued and unpaid interest thereon, and (b) any Distributions), free and clear of all liens, security interests and competing claims, and shall deliver to the purchasing Partner such instruments of transfer (including quitclaim deeds) with respect to the Partnership Property and such evidence of due authorization, execution and delivery and of the absence of any liens, security interests or competing claims as the purchasing Partner shall reasonably request. The defaulting Partner shall be responsible for any stamp, recording and similar transactional taxes payable upon such transfer.

Section 18.6. Form of Payment; Indemnity. At the closing, the purchasing Partner shall pay the purchase price in full by certified or official bank check payable to the order of the defaulting Partner. The purchasing Partner shall also execute and deliver to the defaulting Partner an agreement to indemnify, defend and hold harmless the defaulting Partner against recourse obligations and liabilities of the Partnership and to use its best efforts to obtain the release of the defaulting Partner from any liabilities, direct or contingent, for the payment of any obligation of the Partnership. Such indemnity shall be applicable to all obligations and liabilities of the Partnership, excluding, however, obligations and liabilities which the defaulting Partner knew of, or should have known of, and did not disclose to the purchasing

Partner at or before the time of the purchase and of which the purchasing Partner could not be reasonably expected to have had knowledge.

ARTICLE XIX

INDEMNIFICATION

Section 19.1. Indemnification by Each Partner.

(a) Each Partner hereby indemnifies and agrees to hold harmless the Partnership and, to the extent damaged apart from the damage to the Partnership, the other Partner, from and against costs, expenses, liabilities, damages, claims, demands, actions, suits and proceedings, which shall arise from the indemnifying Partner's doing any act or failure to do any act which (1) constitutes gross negligence or willful misconduct in the Partner's discharge of its duties under this Agreement, or (2) exceeds the scope of the indemnifying Partner's authority under this Agreement.

(b) Failure to indemnity as required under this Article XIX shall be an Event of Default under Article XIII with respect to the indemnifying Partner.

Section 19.2. Cash and Expenses. Any Indemnification called for or authorized under this Article XIX shall include the payment of reasonable attorney's fees or other expenses (not limited to taxable costs) incurred in settling or defending any such claims, demands, threatened actions or finally adjudicated suits or proceedings.

Section 19.3. Scope of Indemnities. None of the indemnities provided for in this Article XIX shall be deemed to apply to or bind or inure to the benefit of any persons or entities other than the Partners, or to indemnify a Partner for damages to the Partnership or other Partner arising from an event constituting an Event of Default under this Agreement. Nothing in this Agreement shall be deemed to create any right in anyone not a party hereto. These indemnity provisions contained in Article XIX shall survive the termination of this Agreement.

ARTICLE XX

MISCELLANEOUS

Section 20.1. Amendment by the Partners. This Agreement may be amended by written agreement of the Partners.

Section 20.2. Notices. All notices required to be given pursuant to this Agreement to a Partner or the Partnership shall be either by personal delivery or be certified or registered mail addressed to the party at such address as registered with the General Partner from time to time. Notice shall be deemed given on the date of delivery or, in the case of notice given by mail, on the day after that on which the same is deposited in the united States mail, addressed as above provided, with postage thereon fully prepaid, if mailed in Honolulu, Hawaii, or on the second day after mailing if mailed elsewhere.

Section 20.3. Benefit. Except as is herein otherwise specifically stated, this Agreement shall bind and inure to the benefit of the parties to this Agreement, their successors in interest and permitted assigns.

Section 20.4. Severability. If any provisions of this Agreement or the application thereof to any person or circumstances shall be invalid or unenforceable to any extent, the remainder of this Agreement and the application of such provisions to other persons or circumstances shall not be affected thereby.

Section 20.5. No Waiver. The failure of any party hereto to seek redress for violation of or to insist upon the strict performance of any covenant or condition of this Agreement shall not prevent a subsequent act, which would have originally constituted a violation, from having the effect of an original violation.

Section 20.6. Headings. The headings in this Agreement are inserted for convenience and identification only and are in no way intended to describe, interpret, define or limit the scope, extent or intent of this Agreement or any provision hereof.

Section 20.7. Waiver. The rights and remedies provided by this Agreement are cumulative and not the use of any one right or remedy by either party shall not preclude or waive its right to use any or all other remedies.

Said rights and remedies are given in addition to any other right the parties have by law, statute, ordinance or otherwise.

Section 20.8. Additional Documents. The Partners shall execute all other documents which may be required or appropriate to carry out the purposes of this Agreement.

Section 20.9. Counterparts. This Agreement may be executed in any number of counterparts with the same effect as if all parties hereto had signed the same document, notwithstanding that all of the parties are not signatories to the original or the same counterpart. All counterparts shall be construed together and shall constitute one and the same Agreement.

Section 20.10. Governing Law; Jurisdiction. This Agreement shall be construed and enforced in accordance with the laws of the State of Hawaii. To the extent not inconsistent with Section 20.11 below, the General Partner and the Limited Partner hereby submit themselves to the nonexclusive jurisdiction of the United States District Court for the District of Hawaii and the Circuit Courts of the First Circuit, State of Hawaii with respect to any matter arising out of this Agreement or the subject matter hereof.

Section 20.11. Arbitration. All disputes with respect to the terms, conditions of this Agreement and the performance of the partners hereunder shall be referred to arbitration as provided in this Section 20.11. Either Partner may commence such arbitration by notice (the "Original Notice") to the other Partner which Original Notice shall name an arbitrator. Within fifteen (15) days following the Original Notice, the Partner receiving such notice may designate a second arbitrator by notice (the "Response Notice") to such Partner, and the arbitrators designated in the Original Notice and the Response Notice shall designate a third arbitrator; provided, however, that if the Partner receiving the Original Notice shall not send a Response Notice within such 15-day period, then the arbitration shall proceed before a single arbitrator, who shall be the arbitrator designated in the Original Notice; and provided further that if two arbitrators shall be designated but shall not agree on a third arbitrator within fifteen (15) days following the Response Notice, then any party involved in such dispute may petition the United States District Judge for the District of Hawaii then senior in service to designate such third arbitrator.

The arbitrators shall evaluate the issues presented and in this regard each party shall grant each such arbitrator access to all information in its possession with respect to the Partnership Business, Partnership Property and the books and records of the Partnership. The decision of any two such arbitrators (or if there is only one arbitrator, such arbitrator) shall be final and binding on all parties involved in the dispute. The costs and expenses of the arbitration shall be borne equally by the Partner sending the Original Notice on the one hand and the Partner receiving the Original Notice on the other.

IN WITNESS WHEREOF, MOL and BGC have executed this Agreement as of the day and year first above written.

MORGAN OIL, LTD.

By _____
Its _____

General Partner

BARNWELL GEOTHERMAL CORPORATION

By _____
Its _____

Limited Partner

EXHIBIT "H"

BARNWELL GEOTHERMAL CORPORATION

MEMORANDUM

TO: CHARLES L. CULTON

FR: MARTIN L. JOKL MJ. CJC

DATE: MARCH 18, 1991

RE: GEOTHERMEX COMMENTS ON DRAFT OPERATIONS AGREEMENT

Listed below are several points with regard to the Operations Agreement that Geothermex, Inc. feels should be modified or more fully addressed. I have no objection to the proposed modifications.

1. The term Generation Facility used on page 2 is not defined. It should include all the activities listed in the final "whereas" of page 1.

2. Geothermex feels they cannot negotiate the "Power Supply Agreements" as called for on page 3 since they cannot sell the power. They can assist in such negotiations.

3. Legal fees should be omitted from the "Project Costs" defined on page 3 since Geothermex desires the partnership to provide legal expertise.

4. The 125% figure quoted in section 2.4 C is too small. Geothermex would like 150%.

5. The opening sentence of section 3.1 is not a sentence. Also, drilling wells for the account of the partnership should be mentioned in section 3.1.

6. Again, Geothermex feels they cannot negotiate for the financing as specified in section 3.4. Instead, Geothermex can assist in such negotiations by providing technical support, identifying lenders, providing bankable reservoir assessments, and well and plant cost schedules.

7. Geothermex feels that the legal services described in section 3.10 should be under the purview of the owners.

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8. Section 6.1, "Non Competition of the Operator", must be modified to allow Geothermex to maintain their current consulting business which includes other clients operating on the Big Island.

9. Section 8.1.1 needs to be clarified.

10. Section 9.2, "Operator's Insurance", is to be at the cost of the owners.

11. Section 9.4.2 - If the partnership terminates the agreement under this section, it must notify the operator of such termination.

12. Section 10.1, "Term", is to be concurrent with the mineral lease.

13. Section 10.4 - "Other Ground for Termination", such as the sale of the partnership or assets, should be listed.

OPERATIONS AGREEMENT

THIS AGREEMENT is made this _____ day of _____, 19__, (the "Effective Date") by and between _____, a Hawaii _____ partnership (the "Partnership") and GEOTHERMEX, INC., a California corporation (the "Operator").

W I T N E S S E T H :

WHEREAS, the Partnership is to be composed of Barnwell Geothermal Corporation, a Delaware corporation ("BGC") and Morgan Oil, Limited, a Kentucky corporation ("MOL") and will be formed pursuant to that certain _____ Partnership Agreement of even date herewith (the "Partnership Agreement") to develop, construct and operate a electrical generation facility utilizing steam and other geothermal resources (the "Generation Facility") to sell electrical power to utilities and consumers all as more specifically set forth in the Partnership Agreement;

WHEREAS, the Partnership desires Operator's assistance in the planning, design, supervision of construction, operation and management of the Generation Facility; and

WHEREAS, the Operator desires to enter into this Agreement with the Partnership to provide its expertise and knowledge of geothermal electrical generation facilities to plan, design, supervise the construction of and manage the Generation Facility, and in addition, if suitable financing is available, drill for Geothermal Resources for the Partnership's account as set forth in that certain Initial Development Plan dated _____, 1991 attached hereto as Exhibit "A" and incorporated herein by reference and that certain Final Development Plan to be developed by the Operator pursuant to this Agreement;

NOW THEREFORE, in consideration of the premises, the mutual covenants, rights, and obligations contained herein, the benefits to be deemed therefrom, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Partnership and the Operator hereby agree as follows:

ARTICLE I

DEFINITIONS

As used herein, the following terms shall have the following meanings, provided however, any capitalized term used herein but not defined in this Article I or the recitals to this Agreement shall have the meaning given such term in the Partnership Agreement, or the Initial Development Plan.

"Construction Contract" means one or more contracts with licensed Hawaii general contractors for the construction of the Generation Facility in accordance with the Final Development Plan. Unless otherwise approved by the Partnership, all such contracts shall be for a fixed sum construction price, together with a unit pricing schedule. The general contractors shall also be obligated to provide the usual and customary lien payment and performance bonds and a list of the known major subcontractors to be used or proposed to be used by the general contractors.

"Effective Date" means the date of this Agreement.

"Final Development Plan" has the meaning assigned of in Section 2.1 of this Agreement.

"Development Cost" means all actual out-of-pocket costs and expenses paid by the Operator to third parties in order to assemble the Final Development Plan.

"Effective Date"

"Engineering Contract" means the contract with the Project Engineer for the preparation of the Development Plan; [provided, however, that Operator serve as the contracting engineer for the Generation Facility.]

"Governmental Approvals" shall refer to the obtaining of all governmental permits, consents, licenses approvals necessary to construct and operate the Project.

"Initial Development Plan" means that certain initial development plan attached hereto as Exhibit "A" and incorporated herein by reference.

"Land" means [insert location].

"Operating Plan" means the plan for the day-to-day management and operation of the Generation Facility to be contained in the Final Development Plan.

"Power Supply Agreements" means those agreements negotiated by the Operator within the terms and conditions for such agreements set forth in the Final Development Plan entered into between the Partnership and utilities and other customers, including but not limited to MOLCO, for the sale and electricity and other by-products generated by the Generation Facility.

"Project Budget" means the budget to be set forth in the Final Development Plan, in substantially the form as the initial draft attached to the Initial Development Plan, which will be prepared by the Operator and which shows projected gross income, expenses, net operating income, and development costs from the commencement of the Generation Facility to full capacity operation of the Generation Facility.

"Project Costs" means all actual out-of-pocket costs and expenses paid or incurred by the Operator to third parties in order to assemble the Final Development Plan and to plan, design, construct and operate the Generation Facility in accordance with the Final Development Plan, including, but not limited to the cost of construction, utility charges (including connection fees and other applicable tariffs), soil testing and engineering, architectural and engineering expenses, legal fees, inspection fees of lenders, hazard and other general project insurance premiums, appraisal, surveying expense, escrow fees, auditing costs, permit fees, expenses and costs, printing and reproduction costs and brokerage commissions, but excluding the Operator's general office overhead, staff salaries, and compensation to be paid the Operator hereunder.

"Project Engineer" means the licensed architect or engineer or architectural or engineering firm selected by the Operator in accordance with the Final Development Plan.

"Project Improvements" means all ancillary buildings, pipelines, generators, utilities, fixtures, equipment, parking areas, landscaping, grading and other improvements integral to the operation of the Generation Facility to be constructed in connection with the Generation Facility as set forth in the Final Development Plan.

ARTICLE II

FINAL DEVELOPMENT PLAN

Section 2.1. Obligation to Finalize Development Plan. The Operator shall finalize the Initial Development Plan to create the Final Development Plan, for the development of the Generation Facility and all necessary Project Improvements which shall contain the items set forth in Sections 2.2 and 2.3 of this Agreement. The Final Development Plan shall be in substantially the form of the Initial Development Plan attached hereto as Exhibit "A" and shall be completed within [180] days of the Effective Date of this Agreement.

Section 2.2. Contents of Final Development Plan. The Final Development Plan shall be in conformity with the applicable governmental laws, ordinances and regulations and shall contain the following: (a) plans and detailed specifications for the design, location and construction of the Generation Facility and related Project Improvements; (b) the Project Budget estimating the total Project Costs; (c) the detailed Engineering Contract; (d) the terms of the Construction Financing; (e) the detailed Construction Contract; (f) the general terms and conditions of the Power Supply Agreements; and (g) the Operating Plan for the Generation Facility.

Section 2.3. Development Timetable. The Final Development Plan shall also contain a Development Timetable which shall list the following items and their expected completion dates:

[INSERT]

The Partnership acknowledges that Operator shall not be in default of this Agreement on account of a failure to meet the above Development Timetable unless such failure is caused by Operator's failure to exert reasonable and diligent efforts to complete the actions specified therein in accordance with the above timetable, or unless such failure is caused by Operator's gross negligence or intentional misconduct.

Section 2.4. Review of Final Development Plan. The Partnership may review the Final Development Plan to determine whether or not it is in substantially the form of the Initial Development Plan, provided, however, that

the Final Development Plan may not be subject to change by the Partnership unless said Final Development Plan;

(a) Provides for a Generation Facility or Development Timetable not substantially similar to those described in the Initial Development Plan.

(b) Provides for a Project Costs, in the aggregate exceeding [one hundred and ten percent (110%)] of such costs as set forth in the Project Budget draft contained in the Initial Development Agreement, after reasonable adjustment for inflation;

(c) Provides for individual line items in the Project Budget which [exceed one hundred and twenty-five percent (125%)] of such line items in the Project Budget draft contained in the Initial Development Agreement, after reasonable adjustment for inflation.

[additional lines]

Section 2.6. Non-Acceptance of Final Development Plan. In the event, pursuant to Section 2.4 the Partnership has the ability to and elects to require the Operator to amend the Final Development Plan, the Operator shall use its best efforts to amend the Final Development Plan to the Partnership's reasonable satisfaction. If after such best efforts the Partnership is entitled to ask the Operator is unable to amend the Final Development Plan to the Partnership's reasonable satisfaction, the Partnership may elect to terminate this Agreement, in which case the Operator will receive the initial compensation set forth in Section 5[__] of this Agreement, and which termination shall have the effects set forth in Article IX of this Agreement.

ARTICLE III

OPERATOR'S MANAGEMENT OBLIGATIONS

3.1 General Responsibilities and Services. The Operator shall be primarily responsible for the development and operation. Generation Facility on behalf of the Partnership which responsibilities shall include the initial planning, designing, obtaining of Governmental

Approvals for, negotiation of financing for and overall supervision of the construction of the Generation Facility and negotiations of the Power Supply Contracts all pursuant to the Final Development Plan. Once completed, the Operator, on behalf of the Partnership, shall manage and operate the Generation Facility in accordance with prudent and sound management practices as set forth in the Operating Plan. All such services shall be performed as more specifically set forth in the Final Development Plan.

3.2 Licenses and Permits. Operator shall apply for and maintain on behalf of and in the name of Partnership, all Governmental Approvals required in connection with planning, location, design, construction, management and operation of the Generation Facility. The Partnership shall cooperate with Operator in applying for and maintaining the same, in accordance with the Development Timetable contained in the Final Development Plan.

3.3 Engineering and Construction Contracts. The Operator shall develop, shall negotiate and prepare the specifications and agreements for design, engineering and construction of the Project and subject to customary bid practices execute such agreements on Partnership's behalf, provided all such costs and specifications under the applicable agreements are as set forth in the Final Development Plan.

3.4 Financing. Operator shall negotiate with lenders to obtain the Construction Financing and the Permanent Financing, which shall be on commercially reasonable terms and provide sufficient funds for the design, development and construction of the Project in accordance with the Final Development Plan. Notwithstanding the above, the Operator shall have no power to bind the Partnership or BGC or MOL to any or all financing arrangements, which shall be executed by the Partnership.

3.5 Operational Plan.

[describe drafting of Operational Plan, when completed, conformance to initial draft, appraisal by Partnership etc. -- also define permitted variations therefrom]

[insert provision or adjustment to changing circumstances, ratification, etc.]

3.6 Power Supply Agreements.

[insert discussion of when they are subject to approval by the Partnership, variations etc.]

3.7 Deposit and Disbursement of Funds. The Operator shall promptly deposit all funds it receives on behalf of the Partnership in interest bearing federally insured accounts established in Partnership's name with banks or other appropriate depository institutions. Operator shall make disbursements from such accounts on behalf of the Partnership in such amounts and at such times as the operations of Partnership may require as contemplated by the Initial Development Plan, the Final Development Plan, the Project Budget or the Operational Plan. [Additional Materials]

[3.8] Financial Systems and Administration. The Operator shall design, implement and maintain, in accordance with generally recognized standards in the industry systems and procedures for financial management, administration, including timely resolution of disputes and other matters required to be resolved in accordance with the applicable contracts and Governmental Approvals.

3.9 Accounting Records and Reports. The Operator shall implement and maintain and appropriate accounting system adequate for design, construction and operation of the Project and shall cause to be delivered to the Partnership monthly unaudited financial statements containing a balance sheet, a statement of income and expenses in reasonable detail, and a comparison between budgeted and actual revenues and expenses for the preceding months and the fiscal year to date and other reports as necessary to manage the Project and to calculate Operator's compensation under Article V hereof. At the sole cost of the Partnership, the financial statements for the Partnership's fiscal year shall be audited or reviewed at the Partnership's expense by an independent certified public accounting firm selected by the Partnership. The financial books and records of the Partnership shall be available for inspection by MOL or BGC and their representatives during normal business hours or otherwise upon reasonable notice.]

3.10 Legal Services.

3.10.1 Operator shall arrange and pay for the provision of the legal services necessary to meet

the needs of the Project, except with respect to any legal dispute between the Partnership and Operator and relating to this Agreement or matter as to which their interests are likely to be materially adverse.

[3.10.2 Operator shall initiate and maintain, or defend in the name of Partnership, any legal actions or proceedings that are advisable to operate the Project. Operator shall obtain the approval of Partnership before initiating or settling any legal actions or proceedings. Partnership and Operator shall cooperate fully with each other, and consult; the Partnership shall make available all information reasonably requested by Operator, in connection with the prosecution, defense or settlement of such legal actions or proceedings and with respect to the costs thereof in connection with such actions or proceedings.]

3.11 Ancillary and Other Agreements. On behalf of the Partnership, Operator shall negotiate and enter into other agreements, with terms not exceeding one year, as Operator reasonably deems necessary or advisable for the furnishing of services, and supplies for the maintenance and operation of the Project other than those previously described herein or those services provided by Operator hereunder, provided however, that such agreements not contemplated by the Initial Development Plan, the Final Development Plan as the Operational Plan shall be subject to the approval of the Partnership.

3.12 Governmental Approvals and Requirements. Operator shall prepare all necessary reports and filings and effect same on behalf of and in the name of the Partnership and take all other appropriate actions necessary for regulatory compliance or otherwise advisable including but not limited to, the Governmental Approvals, in order that the Partnership be in compliance with any requirements of local, state or federal agencies having jurisdiction over the Project, provided that Operator shall consult with the Partnership on an ongoing basis concerning these functions and compliance.

ARTICLE IV

DUTIES OF THE PARTNERSHIP

4.1 Data and Information. The Partnership shall provide to Operator without charge all necessary and relevant data and information in the possession of the

Partnership as shall be reasonably required or requested by Operator in order to enable it to perform its duties hereunder.

[4.2 Office Facilities. Except to the extent precluded by law or prior contract, the Partnership shall make available to Operator office space, furnishings, equipment and office supplies, as may be reasonably necessary for Operator to provides its services hereunder.

ARTICLE V

COMPENSATION TO OPERATOR

5.1 Amount of Compensation.

[Insert provisions re: compensation. Probably different for the initial design phase, construction phase and operational phase - could get a % of the gross of operations - see Plan when it is finished]

5.2 Services Not Covered.

[Insert]

5.3 Timing of Payments to Operator.

[Insert]

5.4 Annual Adjustment to Reflect Audited Financials.

ARTICLE VI

NON-COMPETITION

6.1 Non-Competition by Operator. During the term of this Agreement, the Operator shall not directly or indirectly engage in any developmental, promotional or administrative activity on behalf of any person or entity operating a facility substantially similar to the Generation Facility other than the Partnership in the State of Hawaii without the Partnership's prior written consent.

6.2 Competition by The Partnership. During the term of this Agreement, the Partnership shall not directly, or indirectly contract with any entity other than

the Operator for overall management services of the type provided by the Operator hereunder without the prior written consent of the Operator.

ARTICLE VII

OPERATOR'S AUTHORITY

The Operator shall have only the authority necessary to carry out its duty hereunder. In that regard, except as contemplated by this Agreement, the Initial Development Plan, the Final Development Plan and the Operator's Plan, the Operator shall have no authority to act on behalf of, bind, commit or otherwise act as agent for the Partnership. Nothing contained in this Agreement shall be construed so as to create a partnership or joint venture between the Operator and the Partnership.

ARTICLE VIII

OWNERSHIP OF WORK PRODUCT

[Insert re: who owns work-product? See below for possible suggestions]

8.1.1 All data, computer data base (to the extent relating to the Project), reports and other non-public proprietary business information of the Project or the Partnership created or developed by the Operator in performing, the development and management activities under this Agreement, shall be and remain the exclusive property of the Partnership.

8.1.2 The Operator shall not disclose any confidential or proprietary data, reports or other information or materials concerning the Partnership or the Project without the prior written consent of the Partnership, except as otherwise required by law or regulation applicable to the Project, the Partnership or the Operator.

ARTICLE IX

INSURANCE AND INDEMNIFICATION

9.1 Project Insurance.

[Insert, as contemplated by the Plans?]

9.2 Operator's Insurance. The Operator shall obtain and maintain, throughout the term of this Agreement, professional liability insurance, general liability insurance, property and casualty insurance and workers' compensation insurance covering facilities and employees of the Operator that are utilized in carrying out the Operator's obligations under this Agreement, all in commercially reasonable amounts and terms. The Operator shall provide to the Partnership certificates of insurance evidencing such coverage and requiring that the Partnership be provided with thirty (30) days' prior written notice of any modification or termination of such coverage.

9.3 Indemnification of The Operator. In addition to any other remedies available to Operator, and to the extent not covered by the Partnership's insurance, the Partnership shall indemnify, hold harmless, protect and defend the Operator from and against any and all damages, liabilities, actions, suits, proceedings, claims, demands, losses, costs, and expenses (including reasonable attorneys' fees) that shall or may arise out of or in connection with any negligent or intentionally wrongful act or omission by the Partnership.

9.4 Indemnification of The Partnership.

9.4.1 In addition to any other remedies available to the Partnership, to the extent not covered by the Operator's insurance required under Section 8.2, Operator shall indemnify, hold harmless, protect and defend the Partnership from and against any and all damages, liabilities, actions, suits, proceedings, claims, demands, losses, costs, and expenses (including reasonable attorneys' fees) that shall or may arise out of or in connection with any negligent or intentionally wrongful act or omission by the Operator, or from actions which exceed the scope of the Operator's authority under this Agreement.

9.4.2 If the Operator fails to obtain or maintain insurance pursuant to Section 8.2, unless such

failure is cured within 30 days of notice to Operator of loss or cancellation of required insurance, this Agreement shall be cancelled and terminated.

ARTICLE X

TERM AND TERMINATION

10.1 Term.

[Insert]

10.2 Bankruptcy Termination.

[Insert]

10.3 Termination for Breach or Default. If either party ("Defaulting Party") fails substantially to perform any of its material obligations under this Agreement, the other party ("Non-Defaulting Party") shall have the right to give the Defaulting Party a "Notice of Default." The Notice of Default shall set forth the nature of the obligation that the Defaulting Party has not performed. If, within thirty (30) days following the giving of the Notice of Default, the Defaulting Party in good faith commences to cure the default, and thereafter diligently and continuously pursues the curing to completion within ninety (90) days of such notice, it shall be deemed that the Notice of Default has not been given and the Defaulting Party shall not lose any of its rights under this Agreement by reason thereof, although such Defaulting Party may be required to pay interest relating to such default if so required by the terms of this Agreement. If, within the thirty (30) day period, the Defaulting Party does not commence in good faith the curing of the default or does not thereafter diligently and continuously prosecute and achieve the curing to completion within such ninety (90) day period, the Non-Defaulting Party shall have the right to terminate this Agreement upon (i) sixty (60) days' written notice to the Defaulting Party, or (ii) delivery of written notice if such default is not the first default by such Defaulting Party as to which notice has been given.

10.4 Other Ground for Termination. In addition to the foregoing and without waiving or precluding any other remedies, this Agreement may be terminated upon thirty (30) days' prior written notice:

[Insert]

10.5 Rights Upon Termination. The right to terminate this Agreement shall be in addition to any other remedy available on account of any breach or default.

10.6 Exculpatory Clause. Under no circumstances shall the partners of the Partnership or the partners of such partners ever have any partnership, personal or corporate liability for the performance by the Partnership of any covenant or agreement hereunder, the Consultant hereby agreeing to look only to the partnership assets of the owner for the satisfaction of any claims by or judgment in favor of the Consultant against the Partnership.

ARTICLE XI

MISCELLANEOUS

11.1 Assignment. This Agreement shall not be assigned by either party without the prior written consent of the other party.

11.2 Further Documents. The parties do hereby covenant and agree that they, their successors and assigns will execute any and all instruments, releases, assignments and consents which may reasonably be required of them in order to carry out the provisions of this Agreement. Notwithstanding expiration or termination of this Agreement, each party hereto shall take such further actions as are necessary to fulfill its existing obligations, including those in _____.

11.3 Effect. Without in any way limiting the provisions of Section 10.1, this Agreement shall be binding upon, enforceable by, and inure to the benefit of the parties, their permitted successors and assigns.

11.4 Entire Agreement. This Agreement, including attached exhibits, and documents referred to herein contains the entire agreement between the parties relating to the subject matter of this Agreement. The terms of this Agreement may be modified or amended only by a writing signed by all parties.

11.5 Governing Law. This Agreement shall be governed by and construed, interpreted and enforced pursuant to the laws of the State of Hawaii.

11.6 Disputes Between the Parties; Arbitration. If any controversy, dispute or claim between the parties arises under or relates to this Agreement, including (without limitation) disputes concerning compensation, the parties shall make good faith efforts to resolve such matters informally. If such dispute or claim is not resolved to the satisfaction of both parties within a reasonable period of time, then such matter shall be settled exclusively by arbitration under the commercial rules of the American Arbitration Association ("AAA") then in force. Such arbitration may be initiated by either party by serving a written demand on the other party stating the substance of the controversy and the contention of the party requesting arbitration. AAA shall appoint a single neutral arbitrator who shall be a fit and impartial person. The fees and costs of the arbitrator and related expenses of arbitration shall be borne by the non-prevailing party. If the arbitrators determines that neither party has clearly prevailed, then the parties shall bear equally the fees and costs of the arbitrator and related expenses of arbitration. Notwithstanding the foregoing, if a dispute causes a party to terminate in accordance with Article IX, such termination shall not be subject to arbitration but may be challenged only in a court action.

11.7 Notices. All notices under this Agreement by any party to the others shall be in writing. All notices, demands, and requests shall be deemed given when mailed, postage prepaid, registered or certified mail, return receipt requested, or sent by prepaid express delivery service:

(a) _____
_____
_____
_____

(b) _____
_____
_____
_____

11.8 No Waiver. The failure of any party to insist at any time upon the strict observance or performance of any of the provisions of this Agreement shall not impair any such right or remedy or be construed to be a waiver or relinquishment. Every right and remedy given by this Agreement to the parties may be exercised from time

to time and as often as may be deemed expedient by the parties.

11.9 Enforceability; Severability. The invalidity or unenforceability of any term or provision of this Agreement shall not, unless otherwise specified, affect the validity or enforceability or any other term of provision, unless the term or provision is material and its invalidity or unenforceability results in a substantial economic detriment to Operator or the Partnership in which event the parties hereto shall negotiate in good faith a resolution which to the maximum extent feasible preserves to each party the rights and benefits contemplated hereunder.

11.10 Confidentiality. Each party hereto covenants and agrees that it shall not disclose the nonpublic terms of this Agreement or any agreement supplementing this Agreement to third parties except as and to the extent necessary to disclose authority to act for or on behalf of the Partnership as required by law or for the performance of its obligations hereunder or under related agreements, or as necessary or appropriate in dealing with the accountants, attorneys, and other representatives of the respective parties.

ARTICLE XII

GOVERNMENTAL APPROVALS

In the event that this Agreement is disapproved by any governmental body having jurisdiction over the Project, the Partnership or Operator, and/or this Agreement, and this Agreement is not amended to the satisfaction of the governmental body within ninety (90) days after the

disapproval was received, this Agreement may be terminated by either party hereto.

IN WITNESS WHEREOF, this Agreement is executed the date set forth above.

GEOTHERMEX, INC.

By_____
Its

By_____
Its

Operator

_____ PARTNERSHIP

By Barnwell Geothermal Corporation
Its General Partner

By_____
Its

By Morgan Oil, Limited
Its General Partner

By_____
Its

Owner